The Builder.

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AS the Diploma question occupies the architectural mind very considerably at this moment, and is to be further discussed at the Royal Institute of British Architects on Monday evening next, the 3rd instant, for which purpose the evening is specially set apart, we have displaced some observations on *Birmingham* and the important speeches recently delivered there by Prince Albert and Lord Ashburton, in order to insert the abstract of M. Lance's Essay "On a Diploma in Architecture," which was read at the Institute by Mr. J. W. Papworth, with remarks and suggestions,* on the 19th ult.

Legislation on public instruction has undergone, in the last few years, very serious modifications, which seem to have attracted general attention to the question of education as a whole, and also to the questions of organisation which relate to it *in France and in England*. This movement is especially observable in relation to the profession of the architect *in both countries*. Important reforms in the laws, or in the customs which regulate that profession, had been previously brought forward, *and in England had been partly adopted*. Their object *in France* was to give to the public more positive guarantees of the skill and experience of the artists whose competition that public demands; *and in England, as* well as in France, to give to the body of architects more unity, more strength, more cohesion, and a more defined, and consequently, more respectable, position; so as to ameliorate their worldly condition as managers of a very considerable branch of industry, and thereby to open to architecture, as an art and a science, a more open path in which it might proceed with more consistency, and with a firmer and more assured stride. Such, we say, was the object intended: this is not the time to discuss if the means then sought were those to lead with the greatest certainty to it *in France: it cannot be denied that the establishment of this Institute has done much in this country towards attaining it.*

The notions which were at one time subjected *in France* to searching discussions, and whose realization was pursued in vain with unusual perseverance, though never completely abandoned, appeared for a time to slumber, so much were they laid aside for others causing more general anxiety. At present, if we are not mistaken, these ideas are aroused, and the minds of our colleagues return, with marked predilection, to the study of these difficult questions. It is the general opinion that "something is to be done," and the moment seems favourable for agitating afresh these problems, and for opening the way to a definite solution, whatever that may be.

The profession of architecture is absolutely free. Whosoever likes may practise: whosoever chooses may call himself an architect: no one is compelled, in order to obtain the title, to prove before competent authorities that he possesses any of the knowledge requisite for the discharge of his duties. He is an architect by the same right that another is a manufacturer, a dealer, a speculator in any enterprise: the law supposes that clients find either in private connections, in public notoriety, or in their own discernment, sufficient guides for their appreciation of the skill of those men who represent themselves architects, and offer to direct the construction of works. An observation in the "Dictionnaire d'Architecture," by Roland le Virloys, published at Paris in 1770, is precisely applicable at the present time: "As soon as a man knows a little of drawing, he sets himself up as an architect. Draughtsmen, decorators, and others of that description, are not the only ones who are so bold. If a bricklayer has built two or three houses, he calls himself an architect; and forthwith gives plans and designs to all who are kind enough to listen to him, intimating that they will save the small but useful expenditure of the fee due to an architect; while the real object is only to withdraw from subordination, and exercise the tricks to which the building trades are but too much addicted." *It must be recollected that this is the language of French architects; the English architects have other grounds of complaint; and that the English builders profess to have grounds of counter accusation.*

Is this legal liberty of the profession a novelty? Is it peculiar to our country? Certainly not: for the quotation just given is dated, as before mentioned, in the year 1770; that is to say, at a period when the restrictive system of sworn guilds and corporate freedom, was in full vigour *in France, and apprenticeships in England;* and we know that it was not applied to architects. (*I may observe that M. Lance has not admitted the tradition of the Freemasons into his Essay;*) *but he adds that* in fact the regulations very anciently imposed upon master builders, and the more special and later institution (*in* 1574) of sworn surveyors, cannot be considered as relating to architects.

M. Gourlier, in a report which we shall have occasion to cite presently, justly observes, "It does not appear that any measure was ever adopted to investigate the claims, more or less founded, which individuals might have to call themselves architects, and exercise their profession. Architecture, properly so called, was in this respect considered as a 'free art,' and it was permissible to any one to exercise it at his own proper risk and peril, as also at the risk and peril of those whose confidence he obtained."

Evidently unaware of the Prussian system which Mr. Tite laid before us at our last meeting, M. Lance continues to say that if we examine foreign legislation, it does not appear that it can give any answer other than that from our own country. Everywhere, with a single exception, it is "liberty." At least, the Société Centrale des Architectes, which had maturely studied this interesting question, cites only one country in which the exercise of the profession of architecture is subjected to conditions which are intended to prove the skill of the artists who dedicate themselves to it: that country is Spain; and the date of the institution is recent. The first statutes relative to architects were presented in the last century to King Ferdinand VI. by a Frenchman named Hérard, member of the Academy of Madrid; and they received the royal sanction. They were modified and renewed 29th July, 1801, by King Charles IV. on the proposition of Don Pedro de Cevallos and Isidore Bosart, also members of that academy.

From that time the following custom has existed:—No person may call himself an architect, or practise the profession, if he is not affiliated and approved by the Royal Academy of S. Fernando, and if he has not received a diploma from it. This diploma is obtained under the following conditions:—

Production of a document from some architect affiliated to the Academy, certifying that the candidate has worked under him, and is conversant with the practice of building.

Deposit at the Academy of a design, with its working details, an explanation of the proposed mode of construction, and a specification (the subject is chosen by the candidate).

Actual manipulation of a tinted sketch, &c.

Public examination in the subsequent week, for two or three hours, on practical geometry, the theory and the practice of architecture.

Foreigners are admitted under the same conditions. When this diploma has been obtained, the artist may practise at any place in the dominions of his Catholic Majesty. Private persons need not employ an architect affiliated to the Academy, but if they do not, they have no right to enforce responsibility at law. Only architects affiliated to the Academy can be employed by the Crown.

The two systems are thus brought face to face: — the rule of unlimited liberty, without any guarantee of capacity; — the rule of freedom limited by the necessity of satisfying the conditions of skill which a public authority is charged to obtain. Which of these two rules should be preferred? Which of them presents the most security to the public? Which assures the highest consideration to the artist? Which promises the greatest development of the art? Such are the questions which we want to examine and which it is opportune now to agitate. Before entering into these questions, it will be well, and we believe, not without interest, to consider the very anxious, very elaborate, and very noteworthy inquiries which the Société Centrale des Architectes at Paris has dedicated to this subject. A simple analysis, as succinct as possible, is all we shall ask permission to place before you: *as the two countries differ much in their political institutions, so several of the questions discussed by that Société are peculiar to France, and twenty-four pages of the Essay* by M. Lance, must be condensed into as many paragraphs.

Struck with the isolation in which their fellow-labourers were living, and with the danger resulting from that isolation to the profession, some of the French architects proposed in 1840 the foundation of some central body.

At that time M. Gourlier gave his attention to the question of a diploma, which he treated in an excellent report presented on behalf of a committee to the future founders of the Société Centrale. It might even be said that the study of this subject was one of the objects of the institution. . . . . The report shows that the complaints of the architects are long standing ones. It does not ask for the restoration of guilds and corporate privileges, the revival of the defunct *Académie*, or of the corps of sworn surveyors; but it points out the existence of privileged professions, privileged, that is to say, for the public good; such as barristers, solicitors, proctors, physicians, surgeons, apothecaries, &c. The report asks if there is not an evident analogy between those professions and that of architecture, and whether there is not, consequently, a good ground for subjecting the one, like the others, to certain conditions of capacity; that is to say, to render imperative the possession of a diploma which shall be a mark of that capacity.

The report answers in the affirmative; but as to the application of the principle, it glides away into observations on that topic which are very general, but perhaps wiser ones, and more in harmony with French legislation than those which were put forward at a later time. This report supposed the Ecole d'Architecture, with an altered system of education, to be made a special college, like those of the physicians and the surgeons *in England and in France;* but making it the duty of the Ecole to give instruction, as well as to see that it was acquired; to

* The translator said:—"I have endeavoured to give the passages, which are extracted from M. Lance's Essay, as nearly as possible in his own words, and have therefore only to add, that the remarks in italics are either very much abridged from the Essay by M. Lance, or are suggestions for which I am alone responsible."

examine the candidates, as well as to deliver the diploma: *it also insisted that even a formal attendance in the Ecole should be required of each candidate who had not been educated therein. . . . . In* 1843, *the Société was chartered. . . . .* In 1844, the Société Académique of Lyons requested the opinion of the Société Centrale as to a statement prepared for presentation to the Minister of the Interior upon the faults which existed in the organization of the profession of architecture, and on the necessary remedies. . . . . .

The subject was referred to a committee, and in March and June, 1845, *Messrs. Blouet, Caristie, Debret, Gilbert, sen., Gourlier, Jay, Lebas, Ch. Rohaut, and Leon Vaudoyer, reported* unanimously in favour of the establishment of a diploma; and by a majority, that it should be imperatively required from all architects; and they also pointed out the composition of the board of examiners; the cases in which the diploma should be granted without examination, &c. The council of the Société took that report into consideration, and in June, 1845, drew up a new and excellent work, entitled "Results of the Deliberations of the Council," which was distributed to the members previously to the first meeting held on the 17th June. Both in the committee and in the council, there were some objections to the principle of the creation of a diploma: these objections were founded upon reasons that really did not want weight: a diploma seemed to compromise the freedom of art. Another ground was the difficulty in appreciating artistic acquirements; and fears were expressed lest, in consequence of that very difficulty, scientific acquirements should obtain an invidious preponderance in the examinations. This reasoning failed.

I must here point out that the reason why success did not ultimately attend the efforts of the Société towards the establishment of a diploma, was connected with the second determination to which the committee gave utterance, viz. that it "should be imperatively required from all architects;" a view which was finally adopted by the Société, and which therefore required the assistance of the Government.

Upon the question of the imperative or voluntary character of the diploma, some persons alleged in favour of the more rigorous view, that not to require the diploma from every man before he was allowed to practise, was to fail in the object proposed; that such a step would allow the public to confound ignorant practitioners who usurped the title of architect, with approved artists who merited the rank; . . . . and that besides, if the diploma only authorised the possessor to adopt the title, it was not indispensable to any one in actual practice.

Others replied in favour of the voluntary system, that the profession of architecture, both as an art and as a science, had always been, and ought always to be, open to every one; that it was puerile to make the title essential, if the functions might be discharged by anybody; that in asking too much, there was the risk of obtaining nothing; and finally, that it would be sufficient to stipulate that the architects in the civil service must be possessed of a diploma. This reasoning prevailed, and the council, differing with its committee, adopted the idea of a voluntary examination; . . . . *and also negatived suggestions for the creation of a secondary diploma for assistants and clerks of the works; as well for fixing an age which must have been attained by the candidates.* The council, however, adopted the suggestions of its committee as to the nature and amount of knowledge to be required; as to the composition of the board of examiners; and as to the classes of exemptions. . . . . *It also called attention to the reforms that were desirable in the system of education conducted under the auspices of the Academy, in the section of architecture at the Ecole des Beaux Arts; and noticed the necessity of improvement in the position of the Government architects. . . . . The memoir of the council concluded by adopting as a standard of merit the knowledge to be acquired by earnest study during a whole year in the first class of the* École des Beaux Arts. . . . . .

These results of the deliberations of the council, communicated, as we have said, to the Société at its meeting on the 17th June, 1845, were remitted to sub-committees, one of which carried a proposal that before a general discussion the results should be submitted to a fresh committee chosen by the Société: the new committee consisted of Messrs. de Joly, Armand, Chatillon, Chargrasse, Girard, Nourrigat, Quicherat, Vigoureux, sen. and Gounod, and it finished on 25th February, 1846, its labours, which were laid before the members at their own homes. The new report was perhaps less methodical than that of the council, but very detailed, and full of interesting and carefully studied facts, which rendered it well worthy of the attention which it received. . . . It asks, after some preliminary remarks, if the very existence of the Société Centrale did not render the creation of the diploma useless, and if the Société did not sufficiently distinguish, by its elections, the architects who really deserve the title. The report had no difficulty in giving an answer in the negative; and we are surprised that such questions were even put. Whatever opinions may be expressed upon the subject of the diploma, it is impossible to confound the public and official character which, if given by authority, the diploma would confer upon its bearer, with the truly honourable notice and the favourable inferences which a society like the Société Centrale (*or this Institute*), unshackled but possessing no official authority, can convey in the elections of its members. The new committee did not separate the character of the proposed diploma from the relation that it might have with the body, which ought (*in the opinion of the French architects as well as in my own*) to be completely distinct from it; as distinct, for example, to continue our comparisons with analogous professions, as *the Church from the universities, the Geological Society from the School of Practical Geology. . . . There were other difficulties into which we need not examine, as they were chiefly connected with the Ecole des Beaux Arts.* The report of the new committee contained the following recommendations, viz. the creation of the diploma as a matter of necessity; its obligatory character; no dispensation from examination in any case; transitory measures in favour of positions already acquired; the age of thirty years (which is that absolutely of admission to the Société Centrale, twenty-eight generally in the class of Fellows, to this Institute) and the delivery of the diploma by the offices of a cabinet minister. . . . . .

It will be seen that as the matter progressed, the regulations became more severe. . . Like the council, the committee refused, as we think with great wisdom, to enter into any discussion upon details: such discussion would be fruitless, while principles are not decided. . . Before taking it to the general meeting, the report of the new committee was discussed afresh by the council, and this division gave rise to a remarkable vote, which preceding votes would not have led us to expect, and which, it might be easily foreseen, would not be approved by the body. The council turned round, abandoned its first opinion, and negatived the principle of a diploma. . . . . The discussion of the last report took place at the general meeting of the 11th June, 1846: it was continued on the 24th June and 1st July. The société did not consider itself prepared to discuss the questions relative to the formation of a board of examiners, and to the system of education! these were referred back to the council; and it was not until the 28th October, 1846, that the Société was called upon to decide on these points as treated in a final report of the council. It then resolved,—

That a diploma or certificate of capacity should be instituted, which should be indispensable in future before any person could legally take the title of architect, and practise as such either for individuals or for Government in any part of the country;

That the diploma should be delivered immediately and without examination to all architects actually engaged, and practising honourably; so that existing interests and already acquired positions should be respected;

That a programme should be adopted of the theoretical and practical acquirements which should in future be required, without any exception, for the delivery of the diploma after examinations and competitions;

That a board of examiners should be appointed, consisting of architects;

That the Ecole des Beaux Arts should be remodelled;

That the civil service should be so far reorganised as to assure better treatment to architects who entered into the service of the public. . . .

Here ended what may be called the deliberate phase of the subject: it lasted for six years: the Société had arranged and decided upon its intentions, and had only to push them to realisation. . . . . .

It is only necessary to add that the Société circulated in influential quarters an essay on its wishes, accompanied by the programme; that in 1847, *the Société learnt that the previous Minister of Public Works had spoken favourably of the Société, that the acting Minister had promised his attention to the matter, and that a decree was all but signed when the events of February occurred. . . . .*

The Council, however, applied to the Provisional Government, and reported an interview to the Société on the 6th March, 1848; *whereupon another committee was appointed to produce a new edition of the essay just mentioned. Messrs. Henri Labrouste, Brunet-Debaines (replaced by Haron-Romain), Constant-Dufeux, Gounod, Jay, Adolphe Lance, Lepreux, Lucas, Tougard, and Gourlier, accordingly commenced operations, but the report submitted 10th November,* 1848, *contained only four articles; viz. the alteration of the Ecole; the institution of an imperative diploma; its delivery to practising architects; and the reform of the public service. . . . . It would be painful to enter into a statement of the new discussions which arose in the council, and at the meetings of the Société on 23rd and 30th November, and on 7th December,* 1848, *which resulted in the adoption of the new essay, with the exception of the passages as to the public service and the Ecole; a vote which appears to have put an end for the present to the whole matter.*

The lesson which this history, as given by M. Lance, is calculated to afford to ourselves, is one of the highest importance. The Société Centrale des Architectes, having become very exacting in its requirements, was not content to put its own shoulders to the wheel, and look after the interests of the profession, as a profession, so far as its constitution allowed it; but, perhaps involuntarily,—perhaps obliged by the peculiar institutions and customs of France, it was led to interfere with the Académie des Beaux Arts and its school, to invoke the aid of the Government, and to enter into arrangements between the public service and its architectural officers.

There can be no wonder that having such different objects combined in one project, the Société has not yet gathered any fruit from its exertions.

The questions which arose naturally out of the subject, and which we have seen successively discussed by the council and by the society, were the following: we give them now collectively, *so as to concentrate attention:—*

1. Is a diploma for architecture necessary?
2. Shall the diploma be the result of a voluntary or of an imperative examination?
3. What body shall test the fitness of candidates?
4. What body shall give the diploma?
5. Is it desirable to fix any limit of age in candidates?
6. Shall the examination be open to all candidates?
7. Shall any candidates be exempt from examination?
8. What measures shall be taken to facilitate the adoption of the diploma?
9. What acquirements shall be tested in the examinations?

Does any one suppose that the diploma would take away from the profession of architecture its liberal character, and from the artist himself any portion of his independence? Can the medical man in that respect envy the architect? We think not. But it may be said that architecture should not be compared to medicine, but to its sister arts,—painting and sculpture. We think otherwise. Architecture truly is one

of the imaginative arts, but it is at the same time a positive science. The inspirations of a happy genius are not enough for it: it requires an amount of knowledge which the imagination cannot give. In practice, the architect cannot be compared to the artist, who only requires a canvass or a block of marble to show all that he can do: the architect in some respects is more than that: he is an officer in command of a regiment that does not know the precise result intended by its manœuvres: he is an agent who disposes, it may be said, arbitrarily of the fortune of his client: he is almost a magistrate, compelled to decide upon separate and generally conflicting interests, often of very considerable importance.

Whatever may be said or done, the man, whether he be an artist or not, who is likely to be invested with so much power, and whose position obliges him to accept such a responsibility, cannot pretend legitimately to the independent freedom of artists in other walks, who execute their works with their own hands and at their own risk, without having to give any account of their management. This is so true, that while the painter and the sculptor can give with impunity proofs of their unfitness, the law has a hold, and a tolerably firm one, upon the careless or unskilful, or unfortunate architect. . . .

We say that a diploma would have the advantage of adding to the consideration which the profession of architecture more or less enjoys; and, indeed, it is easily conceivable that in making a preliminary demand upon those who wish to exercise that profession for proof of some amount of acquired knowledge, the presumption of capacity resulting therefrom would place the body of diplomatized architects in a new position. . . . . Without doubt this diploma will not make a *William of Wykeham* nor a *Christopher Wren*, any more than a call to the bar makes a *Cicero* or a *Burke*; but as it would represent a minimum of the knowledge indispensable to the public, it would be at one and the same time a recommendation to its possessor, and a guarantee to the public.

We would say further to the advocates for absolute liberty in the exercise of the profession of architecture,—suppose for a moment that medicine was to become free from all obligation of this sort; that is to say, accessible, as heretofore, to horse-doctors, to farriers, to vendors of nostrums, to barber-surgeons, to all such adventurers, and to any one else who had no other skill than that of boldness and quackery —suppose that; and imagine the condition of suffering humanity under the scourge of such disguised assassins; disputing greedily for the bed's head of the patient, purging here, bleeding there, amputating one extremity, trephining another; in short, having the right to kill anybody under authority of a licence granted for 2*l.* per annum.

Yet this is very nearly the situation in which we are placed by the liberty which we enjoy;—"*an abandonment to destruction rather, in which we are left to perish.*" There is this difference, it is true: the parasites of architecture are less dangerous than those just mentioned, because they attack the purse more than the body of our fellow-citizens; but society owes protection equally to the property as to the person. . .

And, moreover, whatever may be said, the public ought not to be left to assure itself beforehand as to the capacity of architects: the public cannot possibly be a good judge of merits which it cannot itself test. We may even say that the public should in such cases be treated as a minor, and that some authority, some guardian, should exist, not to hinder it from speculating foolishly if it likes, but to give it the means of saving property if it chooses. . .

We have spoken also of the law; and, indeed, there is a relation between that profession and architecture which it is impossible to overlook, because, like the lawyers, we are employed to defend the interests of others. Still there is this difference between an advocate and an architect: the first, properly speaking, is only a counsellor, who in disputes between parties has only a deliberative voice, while the architect's is administrative. In other words, the advocate may plead more or less forcibly the cause of his client, may even be so unfortunate as to compromise the success which he seeks, but sees above him competent and enlightened judges seated to perform justice, and to give a chance that the truth may appear in spite of the ignorance or carelessness of the lawyer, who may risk the interests of his client, but cannot always sacrifice them. Our part in business has a very different importance. The architect is not merely the advocate charged to enlighten a tribunal which has to pronounce judgment; he is more, for he is a judge, who can take no opinion but his own, *and whose decisions are not open to public inspection:* now if this judge be unskilful or dishonest, we guess, and it may be boldly said, we know the abuses and dirty actions which may result from this uncontrollable power, if it is exercised without conscience and without talent. Nevertheless, incredible as it may seem, the law requires that the mere advocate shall have given proof of capacity and experience, while it demands nothing, absolutely nothing, of that arbitrator, referee, umpire, who, under cover of that quality, can commit the grossest errors, nay, even crimes, at the expense of the parties who have honoured him with their confidence.

There is evidently a gross anomaly here which it is of the highest importance to ourselves to remove: *the establishment of the Institute, and its severity in carrying out its law of expulsion, are guarantees to the public of the unimpeachable honesty of its members; but where is the guarantee of their possessing that amount of skill which only can elevate the architect above the self-assumption of uneducated persons.*

The remainder of M. Lance's essay relates to the position of affairs in France so much, as to render it less interesting than I feel certain the preceding portion has proved.

This is, perhaps (continued Mr. Papworth), the proper occasion for submitting my own views as to the practical solution of the question in England.

The necessity for a diploma is apparent from the fact that the junior branches of the profession have for many years been seeking it, as being desirable for themselves and perfectly innocuous to the elder architects. Professor Cockerell will of course support with alacrity any matured plan for securing better public appreciation of the art and its professors. Professor Donaldson has announced in this room, as a matter of self-gratulation to us, the establishment of certificates in two colleges. Sir Robert Smirke, Sir Charles Barry, and Mr. Hardwick, cannot be supposed indifferent to the wishes of their professional brethren. Mr. Sydney Smirke and Mr. Gilbert Scott equally are anxious for the improvement of our position. Mr. Tite you have already heard; and, in fact, the only opposition which the measure of establishing a diploma can encounter would arise from those who feel some hesitation as to the possibility of their deserving it.

The diploma cannot be the result of an imperative examination, without an Act of Parliament to that effect; and the Legislature will of course refuse such an Act until the profession has shown that the diploma is feasible and in operation. The Institute should never require the diploma of any candidate for election into its own body. The examination would be most honourable as a voluntary one.

The examining body should at first be composed of those who occupy a high station with the profession and with the public: hereafter those who take the highest honours would replace them as occasion shall demand.

The question of the body which should grant the diploma is a difficulty in the eyes of some. There have been three competing opinions as to the preference to be given to the universities, the examiners, or the Institute. The universities might follow our example if they found it well so to do: the examiners would be subordinate to ourselves; and therefore the Institute, especially if it should obtain an amended charter, seems to be the body which, as professional men, we should prefer.

It is hardly less desirable to fix any limit of age to candidates, than to close the examination-room against any candidate, whatever may be his position in society: if he be found fit to practise as an architect, that qualification should entitle him to the diploma.

The exemption of any candidate from examination would be a fatal error; nor should any candidate be allowed to pass upon a lower standard than that fixed for all comers.

To facilitate the adoption of the diploma, I imagine the adoption of a chairman, who should be, if possible, a president of this body. I imagine that the three professors would not refuse to accept the diploma at his hands; and then we have a board who could give to all qualified persons, who have practised legitimately during the last few years as architects, the diploma of Master in Architecture, and to those who have been so engaged for a short time only, the diploma of Bachelor. I suppose that some would be found to deserve the most honourable degree of Doctor in Architecture.

It must be evident that the severity of examination for these degrees must be relaxed for the first three years: there are men of established repute whose neglect of the diploma might be hurtful at first to its existence, and who might not choose to do more than present themselves personally to claim it; and this class must be consulted in order to facilitate the transition.

Then, when the examinations are fixed, the board would only have in the first year to verify the position held by the candidate, and his power of making before them a tinted sketch and an outline of detail, in order to hand to him their certificate of the ordinary degree of Master or Bachelor, as the case may be. While if the candidate apply for a higher degree than that which he would ordinarily claim, we should all rejoice at his being found worthy of it.

At the end of three years the examinations should be stricter, and at the end of five years they should have attained the ultimatum, for a time, of their severity: then the profession would be in such a position as it cannot at present hold; and might reasonably hope to procure the adoption by the Legislature of a Bill against quack-architects.

I shall conclude by observing that I sincerely hope the examinations will be public, i.e. will be held in the presence of any graduates who choose to attend them; and that the examiners will avoid the fault of the continental systems, and not ask questions upon formulæ and facts to test the memory of a candidate crammed for the occasion, and ready to forget all on the next day,—but put such questions as a candidate may be expected to answer, by referring to works in the library of the Institute. It is not what a man can recollect, but his knowledge of how to use and where to find information, which is the great secret of the skill of the architect as a scientific man, and of his knowledge as an archæologist. His taste cannot even be a question for the examiners; but readiness with the chalk, the brush, and the pencil are, I venture to presume, indispensable to the man who lays claim to the authorised title, the honourable title, of architect.

ON ARTISTIC METAL-WORK.*

We have now to treat of another process of ornamentation, namely,—that of Niello. This art, almost in disuse for the three past centuries, was practised during many ages and in different countries. There is a singular passage in Pliny, to the effect that by an invention of the Gauls, argentiferous lead was fused into works of brass, and the effect so produced was called incoctilia; and he remarks,—"That which was marvellous to behold in the decoration of vases and articles of Roman luxury, by them was used in the decoration of their horses, the yokes of their oxen, and in their various kinds of vehicles." I have seen in Scotland remains of Scandinavian origin inlaid with the same material, proving its use by this race of people. Slightly varied in its composition it was called at its earliest period incoctile: later it assumed the name in Latin of nigellum; in Italian, niello. It was thus used. The subject intended to be delineated was first traced upon the surface of silver, and the groundwork cut with tools as in champ-levé enamel, leaving the figures raised in silver: this was frequently reversed, and the subject itself represented by the niello. In its composition, silver, lead, sulphur, &c. are combined; and it is one of the greatest difficulties of the process that in fusing, either the sulphur destroying the nature of the niello, or the silver reviving into a metallic state, covers the surface of the niello with small white spots. Another great evil frequently results from the heat necessary for its fusion, causing its combination with the silver in which it is worked, instead of forming the contrast intended. In a ruin at Rome, a silver casket of Roman workmanship was found, of about the date of the fourth or fifth century, covered with enrichments in niello, containing the requisites for the toilet of a Roman lady, and will prove the use of niello at this period. Chalices and other articles were continually

* See p. 551, *ante.*

enriched with it during the thirteenth, fourteenth, and fifteenth centuries.

Associated as it is with many ages, expressing as it does in the decorative art, the higher or lower degree of the perception of beauty attained by people so differing in habits and manners, it loses none of its interest from the fact, that it was both the forerunner and origin of the art of printing from engraving. We are informed by Vasari that Maso Finiguerra, the goldsmith, of Florence, in taking impressions in black ink from incised lines intended to hold the niello, gave to the world the first production of an art (engraving), which has developed in the present day so much talent and skill, throwing within the reach of the many those beautiful emanations of genius, otherwise confined to the collections of the rich alone. Another process, Damascening, consisted of incising fine lines of foliage, or other ornamentation into iron, copper, or any of the baser metals, and then, with gold or silver cut to the same form, filling up the cavities. It may be found in the antiquities of the Saxons, the Irish, the Romans, during the Middle Ages, and in the East.

Parcel gilding forms another mode of giving variety to the surface of any article, by fixing gold in some places, while in others the silver is allowed to remain in its natural colour. Shakspeare speaks of a chalice parcel gilt, and in ancient chalices the interior of the bowl, a slight margin down the outside of the lip, the boss, portions of the foot, and occasionally small parts of the stem, were gilt. By this means a greater beauty is attained than by whole gilding; it was in use from the twelfth to the seventeenth century.

Bronze and brass, unlike the precious metals, find their more natural expression in casting, producing a sharp line from the sand, and form a ready means of perpetuating the models made in wax by the artist. Examples are numerous of large doors of bronze, some nearly plain, as at Mayence Cathedral, while others have panels containing historical subjects and figures of saints, apostles, &c. as at Monreale, in Sicily, by Barisanses, containing twenty-eight panels, with figures in relief. They occur in numerous other places. At a later period Vasari describes the particulars of the celebrated gates, now so well known, executed by Ghiberti for the company of merchants at Florence, intended for the Baptistery of San Giovanni, which were to rival those of Andrea of Pisa. There were seven competitors, from whom Lorenzo Ghiberti carried the prize, and whose production was confessed to be the best even by those with whom he competed. Much of his success is attributed by Vasari to his early education as a goldsmith. In the various church restorations of the present day, I know no attempt to reproduce gates in bronze of artistic character. The bronze figure of Henry, by Wm. Torel is a well-known example in this material. Fonts of brass occur frequently on the Continent, and I would suggest the use of the material in combination with iron, and with subjects in enamel on the surface.

Of works in iron, if time permitted, the gradual changes might be traced of each succeeding era of architecture, assuming the conventional forms of the day, and subject to various modes of treatment.

In iron it will be evident the proper mode of working must differ as much from gold as it does from wood or stone, assuming a position about midway. Gold, from its great value and power of attenuation, is naturally used in sheet and filigree, not frequently rendered in solid masses, and many times serving as a covering to a less expensive material; while iron may be used in quantities not so massive as stone, but capable of such attenuation as to render it light and beautiful in its general conformations. Who has not been delighted abroad with the light grille dividing some portion of a cathedral, or the wondrous strength and delicacy combined in the hinges of doors, the lightness of chandeliers, and coronæ ornamented with hammered leaves?

How readily will come to mind the hinges of Merton, those of Lichfield, Notre Dame at Paris, the well at Antwerp of Quentin Matsys, and many other evidences of the application of true principles and taste to the manipulation of this material.

Suppose nothing more is done than at present, and the *artistic* use of metal makes no further progress, what, for instance, in this nineteenth century, is there on the *face* of London to vie with those works of art left, as it were, by the surges of centuries on the sands of time, indicating the tidal line which art had attained? Will the pump of Piccadilly rival the well of Quentin Matsys, each being for the same object? Will the handle on the door of the Home Office compare with that of the Seven Electors? Take the iron gas-lamp, placed probably by street commissioners near a large recent structure, in London, of fine architectural proportions, or the lamp from the large staircase of Christ Church, Oxford (what, by the way, would the founder, Wolsey, have thought of this accessory?), and compare them to the bracket, for the same purpose, of hammered iron from the Domkirk, at Innspruck.

Having now briefly glanced at metal-work and its enrichments, it becomes the question how far at present we have availed ourselves of the many advantages it offers.

I think we may, by calling to mind the various works, in brass and iron, which have been used in other ages as accessories to and portions of architectural design, and by trying to realize what has been swept away by the ravages of time, and the still greater ravages of man (even with the many energetic and laudable efforts which we have seen of late for its use), we may safely conclude, that we have not as yet reached its large application in bygone days. Where are our grilles, altars, lecterns, brasses, lamps, pulpits, crestings, vanes? where our recumbent effigies, our tombs, our fonts? where our gates of brass and bronze. Churches and domestic buildings were rich in these things, in days when metals were difficult of access: how far behind are we in this nineteenth century, essentialy the metallic age?

Compare, for instance, the few furnaces of the middle centuries blown by hand—heated by charcoal—with the thousands which now darken the air, and emit their flames in Staffordshire, in Scotland, and in Wales, aided by exhaustless supplies of coal and ore, and stupendous steam-power helping also its production. Then, however capable its inherent powers, its scarcity was an effectual bar to its extended application, now saving only its full development in Pointed architecture. It is difficult to know where to begin in citing its use. Do we look down on the map of England,—what vast and complicated network threads its surface! unlike the great Roman roads of old, it is of iron, and not of stone.

Do we wish to span the thundering falls of Niagara? it is with iron, and not timber, the trial is made. Yet, on the other hand, do we wish to span the roof of a cathedral? wood is used,—though the forest which originally supplied the ancient ones have disappeared, and we traverse the broad Atlantic to make up the deficiency,—metallic materials in abundance lying around us. Or, again. Look at the vast covering to the terminus at Birmingham; the Crystal Palaces; the great girdle of iron and glass to encircle London, which has just been recommended to the consideration of Parliament; the roof of the British Museum; the Menai Bridge;—and let us ask ourselves if the world is not outstepping us in the appreciation of its wondrously constructive powers.

In many erections within our memory, there have been sums expended almost fabulous, in which erections artistic powers have not been united with scientific skill. Had this not been the case, and had art found its legitimate expression in the adornment of construction, we might rather have referred to the progress we had made, than have speculated upon the nearness of that period so much to be desired.

It is perhaps in our great works of national improvement, termini of railways, large central stations, and other improvements, where thousands are dealt with as units would be in private efforts, that we may expect to see some *first*—some manly struggle in a direction at present but too slightly attended to.

It may be replied to all this,—iron is not capable of beautiful expression. Have we tried its artistic powers with the same energy as other materials? What is a piece of burnt clay, a lump of stone, without architectural construction and artistic skill? Nothing more than a bar of iron. A wall of rubble has little of interest; yet a cathedral, with its clerestory and flying buttresses, is but a wall supported and enriched. All these raw materials are alike unpromising: it is genius which rears them into forms of utility, of grandeur, and of beauty.

When the Pointed arch first gained use, what new features of construction were brought into existence? what an era does it mark? The genius of the day seized it, and charmed succeeding ages with those exquisite proportions eliminated from it; but what is the arch? Not the natural or easy expression of stone: wooden framing has first to be constructed; and on this the pieces of stone are placed: without those crutches each individual piece would fall to the ground; but unlike stone, iron at once assumes the arch by only complying with its natural tendency: it needs no prop: what adhesive power in its own nature is it capable of! what ponderous weight and compression will it sustain! What is the limit of its span?

Now, let us for a moment suppose that the men who built our cathedrals, and carved out their own paths of originality and beauty, had possessed this material as we do: we should most probably have received some extraordinary relics for our antiquarian lore. In claiming for iron, then, and other metals their fair amount of importance, or urging their much more extended use, am I doing what one may be so apt to do, overrating the use of that which is more particularly one's study and province? So far from this, the Ecclesiological Society has long announced its intention of bringing out drawings for an iron church; and the late Mr. Carpenter had received instructions to prepare plans for the same. The Oxford Architectural Society has urged similar views, and the *Builder* has written forcibly upon the subject. I might quote many architects who, in their words and writings, express their convictions that sooner or later these materials must take their high rank in architectural design.

Now, by an iron church, I do not mean, nor do I suppose the Ecclesiological Society meant, having its walls made of, and no thicker than, a sheet of corrugated iron: it is essential, in construction, that its wall should be double, giving security against atmospheric changes, and at the same time imparting solidity. Again, there are various modes by which the interstices of the frameworks may be filled with ceramic art, with marbles, or stone carvings, or all three united, the arrangement of colours and combination of geometrical form giving ample opportunities to the skill of the architect. It is not as superseding the use of stone, but in conjunction, that some great effort might be made. It is in the union of the powers of the past and the present, and so availing ourselves of all the arts and materials of our day, that we may hope to accomplish great ends.

Is there any one in this his present lifetime, expects to be called upon to raise a cathedral, which might proudly rival Canterbury or York Minster—too long the process, too costly the material? But there is an extraordinary opportunity offered in the constructive facilities of the various materials, for some one to leave a house to the future, and an edifice which would more than compare with the mightiest efforts of the past—the delicacy and sharpness of its outlines standing unrivalled: its walls internally would give large scope for frescoes, glowing with rich hues of colour, and of gold—for enamels, for mosaics, and carvings of stone, affording to it solidity of character. With such constructional powers, externally its height of roof might be something marvellous, while its gilded spires, with their sharp outline, would soar brilliantly to contrast with the clear blue sky. In its nave, a span for vastness and height might be attained, compared with which many existing cathedrals would be but side aisles: its roof, internally fretted with interlacing lines of construction, would be almost lost in the gloomy grandeur and deep shadows of distance: these and its spandrils might be enriched with vigorous yet delicate manipulations in iron, crisp with foliage derived from nature: its

columns, groups of detached and illuminated shafts, would attain an altitude unprecedented. I hope and believe some vigorous intellect—some strong hand, will erect such a cathedral whose form of grandeur will loom on in the hazy mists of the great future, and succeeding generations of the human race will point to it as a noble effort of metallic and kindred arts of this *our* century. F. A. Skidmore.

THE ARCHITECTURE OF THE FUTURE.

LIVERPOOL ARCHITECTURAL SOCIETY.

The fortnightly meeting of the above society was held at the Royal Institution, Liverpool, on Wednesday evening, the 14th ult. Mr. J. Hay, president, occupied the chair.

Mr. Verelst spoke highly in favour of the exhibition of architectural designs, &c. to be opened in London on the 17th inst. It had often been a source of regret to him to see how few of the Liverpool architects contributed to the public exhibitions. He alluded with much pleasure to the success of English architects in the Exhibition at Paris.

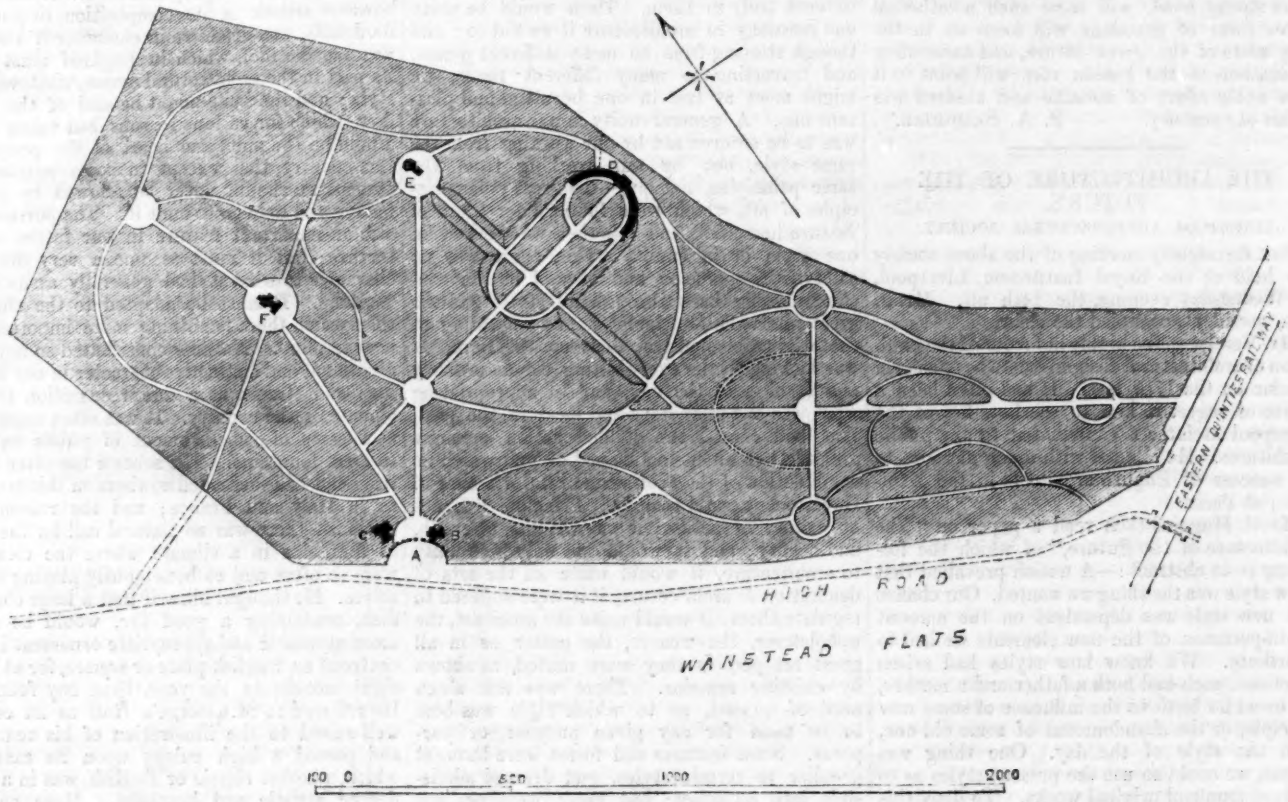
Mr. S. Huggins then read a paper on "The Architecture of the Future," of which the following is an abstract:—A notion prevailed that a new style was the thing we wanted. Our chance of a new style was dependent on the amount and importance of the new elements we had to contribute. We knew how styles had arisen aforetime: each had both a father and a mother, and owed its birth to the influence of some new principle, or the abandonment of some old one, upon the style of the day. One thing was certain, we could so use the present styles as to produce true and original works. To deny this was as absurd as to deny to the poet the power of producing a new poem without first inventing a new language. The historic association of the Gothic or Classic architecture with the spirit and character of the period of its production was an objection that should be confined to individual works. The styles might be productive of edifices that should bear the broad seal of any time, as much of the present as of a past day, and be unequivocal exponents of the mind and circumstances of the age. But individual truthfulness like this would inevitably tend to the desired expansion and ramification of the style. Something every now and then would appear that had not been seen before: if it were ungenial to the style its spirit would reject it; but if otherwise, and the work in which it appeared was found to be in accordance with the unerring laws of art, and all its parts were in unison, the innovating feature would soon be absorbed into the system, and form a part of it. Thus was the system made, and thus was it to be carried on. This was the way the Classic architecture was formerly treated in one of the greatest art revolutions, viz. that which took place soon after the time of Constantine the Great in the development of Byzantine art, where originality was observable in every form in the capitals, in the mouldings, &c. They introduced new principles of decoration, such as sinking carved work of capitals beneath bounding lines of form, instead of projecting it beyond them. It was not at all important that we should leave a uniform architecture, *i. e.* an architecture all in one style, to the inspection of posterity. The object we had to set before us was to erect works such as would individually comply with the conditions of original and genuine works of art. Any mixture of style consequent upon our working in a plurality of styles was not to be feared so long as it was done by men who understood their work. No matter whence the origin of elements in the hands of the true artist; his work would be *one*, and rightly affect the mind. It did not follow that because the Greeks and other ancients had but one style for temple and theatre and other edifices, that a plurality must therefore be improper amongst us. Those who urged this forgot the difference between our civilization and that of ancient times. In Greece all was unity; everything was the emanation of a master feeling or passion, which was invariably a devotional one. It was of no use to say that this ought to be the case with us, because the architect had to do with society not as it ought to be, but as he found it. The present state of modern life might perhaps be best represented by a plurality of styles: what we had to do was to work truly in them. There would be unity and harmony in architecture if we did so; and though starting from so many different points, and traversing so many different roads, we might meet at last in one beautiful and pleasant one. A general unity in our architecture was to be secured not by our working from the same style, but by our working from the same principles, namely,—the great polar principles of art, which were founded on those of Nature herself. And whether we worked in one style or in twenty styles, there was no safety from confusion and discord but in constantly going back through all styles to their great fundamental principles, and appealing to the original elements in their constitution. It was looking to the ever-shifting clouds of fancy and fashion of the day, and in appropriating what was but temporary and local in the past, that had caused the divided action amongst architects so much complained of, and which no combination of the profession or interference of Government could remedy. Principle was not only unity of action; it was wisdom, strength, and beauty; and it would not only give unity to architecture, it would unite all the arts of decoration *to* architecture, if it were suffered to regulate them: it would unite the architect, the upholsterer, the weaver, the potter, as in all great art periods they were united, as shown by existing remains. There was not much need of quarrel, as to which style was best to be used for any given purpose or purposes. Some features and forms were thought peculiar to certain styles, and deemed admissible into no other; but there were perhaps few forms in any style that could not be translated into another. It was not style, but the intellectual and imaginative power that was to apply it, on which success depended. The dispute about styles seemed not much unlike a speculation upon the merits of different military uniforms or kinds of armour; and, indeed, to calculate upon the result of architectural doings from the character of the style or styles we adopted was as idle as to predict the issue of an encounter of warriors from the mere length of their swords or strength of their armour, without taking into account the personal force and prowess of the combatants. Notwithstanding what had been advanced, it was nevertheless true that one style was better fitted for general purposes than another, as there was much difference between them in point of scope, if not of power. He considered the Greco-Romano system was the soil most capable of yielding the multiplicity of forms which the exigencies of the future would demand from architecture. The Classic style—having been carried to perfection in but one very limited and simple class of structures, the Greek temple — afforded us more room for new and original combinations than its rival, the chief productions of which, the cathedral of the middle ages, the attempt to emulate would be hopeless. The general and dominant style of the future, he believed, would be mainly composed of the Roman arch springing immediately from the Greek or Roman column, *i. e.* the noble Byzantine and Lombardic styles, known under the general appellation of Romanesque, divested of everything like barbarism, and restored to classic purity. This did not involve the abandonment of the entablature, for with such purified ordinance could be well combined the classic colonnade or portico in its original integrity. The style so generated would be the true artistic blending of Greek architecture with Roman arcuation. It was when the column was placed under the arch as an arch pier that the marriage of the two styles was truly consummated, and artistic unity secured. By the system he had endeavoured to sketch out would be embraced every necessary feature required by our climate and state of social existence, such as sloping roof, window, portico, porch, and so forth, and this should be well observed. A true Anglo-classic building was one from the visible composition of which no needful feature was excluded, and in which the features we borrowed from classic antiquity, or derived from any foreign source, such as the portico, were fully adapted to our purpose, and cast into the new moulds that by the circumstances of time and place were prepared for it. A building, however artistic in its composition, or pure in its details, was defective in character if visually wanting the roof, which in England must play its part in the architectural drama, whatever the style; and the same might be said of the window, which for various reasons had taken such a hold on the mind and heart of the people of this country, that except in some peculiar instances we should never be allowed by public feeling and opinion to omit it. The portico was also an important feature in our future architecture; but it must assume a very different character to what it had generally assumed in England. It must be adapted to the climate, than which there is nothing more important to bear in mind. Nothing contributed so much to a national and distinctive character in our buildings and streets as a due recognition of the climate of the country. It was often suggested as a means of embellishment of public squares to erect fountains. The scheme has often been tried, but had succeeded nowhere in this country as in Italy and France; and the reason was obvious—there was no natural call for the play of fountains in a climate where the elements were so often and so bounteously playing themselves. He thought himself that a large chafing-dish, containing a good fire, would be a far more agreeable and appropriate ornament in the centre of an English place or square, for at least eight months in the year, than any fountain. He referred to St. George's Hall as an edifice well suited to the illustration of his remarks, and passed a high eulogy upon its exterior, which, whether classic or English, was in a high degree artistic and beautiful. Here eulogy, however, though qualified, must cease. The approaches to the building were a subject not merely for regret to architects, they must be an offence to every one possessed of the smallest share of taste. In conclusion, he contended that the style of the future, combining as it would greater elements than any former style, and based on everything great and glorious in the foregone, might pass beyond the range of the Greek or the Gothic, allow the fullest scope for man's intellectual energies, and be receptive of all possible elements of change for any period of time.

DEATH OF ALDERMAN LAWRENCE.

It is with feelings of deep regret that we announce the decease of Mr. Alderman Lawrence, on Sunday, the 25th ult. at his residence, Westbourne-terrace, Hyde-park, in the 67th year of his age. He was a man of enlarged capacity, keen perception, ready eloquence, and of the highest integrity. As a public man, he opposed all jobbery, all waste of public money, and advocated the execution of public works in the most efficient way. He was the head of the well-known building firm which bears his name, and many of the erections in New Cannon-street reflect the energy and completeness which were the characteristics of his vigorous mind, being the fruits of his spirit of enterprise. In the public boards, of which he was a member, he took a leading part, and rendered great services, though his views were not always ours. He was elected alderman of Bread-street ward in 1848, served the office of sheriff in 1849, and was within one of the civic chair, being preceded only by Alderman Finnis. He has for two years suffered from deranged liver, under which he has at length sunk, in the full possession of all his faculties and energetic spirit.

FORTIFICATION OF THE ISLE OF WIGHT.

Mr. James Fergusson has brought charges of incompetency against the engineers who designed the fortifications recently erected opposite Hurst Castle, so serious as to command reply. He asserts, and he is too careful a man to do so on insufficient grounds, that the forts are constructed so as to be altogether useless, and that the affair shows "our incompetence in military matters to all Europe in a manner that makes one's blood tingle." A semi-official denial has appeared in the *Times*, where Mr. Fergusson's letter was published, but Mr. F. reiterates his charges. What *is* England coming to?



PLAN OF THE CITY OF LONDON CEMETERY, ILFORD, ESSEX.

THE CITY OF LONDON CEMETERY.

The City of London Cemetery is situated at Little Ilford, in the county of Essex, and is precisely seven miles from the General Post Office. The roads to it the whole way are level and good. The area enclosed within the boundary fencing is about ninety-one acres. On the southern side the cemetery is touched by the Eastern Counties Railway: on the northern side it is bounded by a portion of the Wellesley estate; on the western side by the Wanstead Flats; and on the eastern side by surplus land belonging to the Commission. The surrounding country is richly wooded.

The soil is principally of bright gravel, varying in depth from 10 feet to 18 feet. It has been drained to a depth of about 11 feet. The ground rising with a gentle slope from the River Roding to a height of 27 feet above the mean level of that river, affords an outfall for the drainage. The cemetery is enclosed by a strong oak close fencing, 7 feet in height on its north-east, and a small portion of its north-west sides; on the remaining portion of that side, and the southern side, by an open iron railing on a dwarf wall, the height varying from 8 feet 6 inches to 11 feet 6 inches.

The principal entrance is from the Wanstead flats (which flats, we may remark, so far from being low swamps, as is generally supposed, are about 40 feet above high-water mark, T. D. and the soil of which is a fine large gravel beneath the peat surface). It consists of an entrance archway, in the Pointed style, as are all the buildings throughout, with ornamental iron gates, and has on one side the superintendent's house, and on the other the porter's lodge. We shall give a view of this hereafter, and other illustrations.

Directly upon entering the principal gates, the Dissenting and Episcopal Chapels, although 700 feet apart from each other, are both in view, the roads to each being direct lines from the entrance. The plan of the ground was designed in reference to the surface configuration, and other conditions, and is composed partly of straight and partly of serpentine roads.

Through the middle of the ground, and running from east to west, there was a large pond. This has been used as a main valley line for drainage; and at the extreme eastern side this pond has been *deepened*, and catacombs placed in it. The catacomb valley, or basin, is about 500 feet long, and 230 feet wide, and is about 11 feet beneath the level of the adjoining ground, and enclosed by grass slopes, of 2 to 1. The tops of the slopes are planted with rows of arbor vitæ. The earth excavated from this valley, was well fitted, it appears, for disposing upon other portions of the ground for planting the shrubs in, and was so used. We give a plan of the cemetery, and a view of the Episcopal Chapel. The general surface of the ground was originally level: the whole of the undulations now upon it are artificial; that which slopes towards the pond line alone excepted.

The length of the Episcopal Chapel is 61 feet 6 inches within the walls: the Dissenting Chapel is an octagon of 34 feet in the clear, with an elongation on one face, which makes the length 45 feet 6 inches. All the buildings are faced with Kentish rag with Caen stone dressings.

The cost is estimated as follows:—

Land	£30,500
Chapels, entrance, houses, fencing, draining, earthwork, and planting	45,450
	£75,950

This sum, it is expected, will not be exceeded.

The Commission have a surplus hundred acres, the value of which should be deducted from the 75,950*l.* They bought this large quantity because they obtained it proportionally cheaper thereby, and with the impression that it might be sold to other parishes for cemetery purposes; and as the buildings of the City of London Cemetery, the staff, and the machinery attaching to the railway, might be made to serve for the whole, the first cost to all concerned, and the charges for interment afterwards, would be made less than would otherwise be the case.

It is in contemplation to build waiting-rooms and a railway siding, and have railway accommodation for burials, if other of the eastern parishes who as yet have not provided themselves with cemeteries take the adjoining ground; but, unless the interments be numerous, it would not answer the purpose in a pecuniary point of view to do so.

The fencing, railings, some of the main drainage and earthwork, were done by Messrs. Crook and Son. The chapels, lodge, superintendent's house, and entrance archways, the drains, gullies, and the great mass of surface excavation, by Mr. William Hill, of Whitechapel. The roads and catacombs now in hand by Mr. R. T. Carlisle. The whole has been carried out from the designs and under the superintendence of Mr. William Haywood, the surveyor to the City of London Commission of Sewers.

REFERENCES TO PLAN.

A. Principal Entrance.	D. Catacombs.
B. Porter's Lodge.	E. Dissenting Chapel.
C. Superintendent's House.	F. Episcopal Chapel.

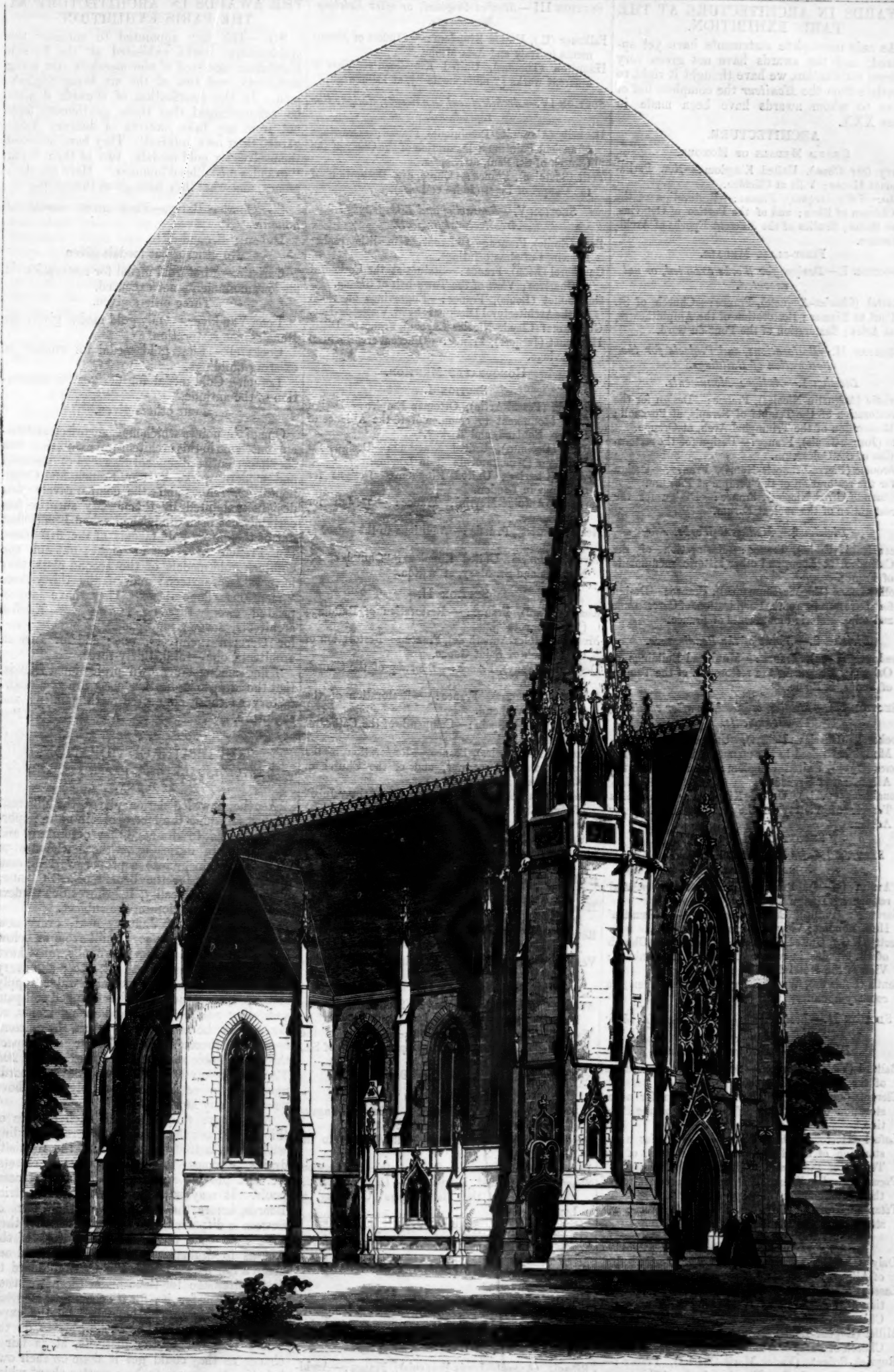
IS TOWN DRAINAGE BENEFICIAL?

SUNDERLAND.

In answering the above question, I do so (as a Scotchman) by asking another question:—*Is it beneficial to have slops removed from bed-rooms every morning?* I have just hired a house, the bed-rooms of which are up three pairs of stairs, and my wife is about to hire a chamber-maid to empty the slops and cleanse the bed-rooms every morning, at an estimated cost of nearly 45*l.* a year. Before entering upon the responsibility of spending the large sum of 45*l.* a year, I have halted at the outset, and now ask the following questions:—1. Is cleanliness in bed-rooms beneficial? 2. If so, whether is a yearly superficial cleansing or a thorough daily cleansing the most so?

A difference of opinion appears to exist on the question, and I wish to obtain the opinion of other persons who have large families, whether it is better to allow the family refuse to accumulate in the house, and have it removed yearly, when the family is from home, for the benefit of their health, or is it more *beneficial* to have it removed every day? If so, which is the best way of removing it? There is plenty of fall from the top of the house to the street, and if the slops were thrown on the floor, they would soon find their way down the stairs to the street; or would it be better to throw them out at the window? It is so very expensive these dear times to keep a servant, merely to remove the refuse and keep the house clean. The discussion and settlement of this great question must necessarily take place previous to the discussion and settlement of the Sunderland town drainage question.

WANDERING WILLIE.



VIEW OF THE EPISCOPAL CHAPEL, CITY OF LONDON CEMETERY.——MR. WILLIAM HAYWOOD, ARCHITECT.

AWARDS IN ARCHITECTURE AT THE PARIS EXHIBITION.

As only incomplete statements have yet appeared, and the awards have not given very general satisfaction, we have thought it right to translate from the *Moniteur* the complete list of those to whom awards have been made in Class XXX.

ARCHITECTURE.

Grand Medals of Honour.

Barry (Sir Chas.), United Kingdom:—New Parliament House; Villa at Cliefden.

Duban (Félix-Jacques), France:—Restoration of the Château of Blois; and of the Portico of Octavius, at Rome; Studies of the different Epochs of Architecture.

First-class Medals.

Section I.—*Designs for Works executed, or not executed.*

Questel (Charles-Auguste), France:—Church of St. Paul, at Nismes; Restoration of the Amphitheatre, at Arles; Restoration of the Pont du Gard.

Section II.—*Restorations, and Projects for the Restoration of Buildings.*

Division 1.—*Antique Monuments.*

Caristie (Augustin-Nicolas), France:—Design for the restoration of the Temple of Serapis, at Puzzuoli; Restoration of the Triumphal Arch, at Orange.

Duc (Joseph-Louis), France:—Design for the restoration of the Colosseum.

Labrouste (Pierre-François-Henri), France:—Design for the restoration of the Temple at Pæstum.

Normand (Alfred-Nicolas), France:—Design for the restoration of the ancient Forum.

Division 2.—*Mediæval Works.*

Bœswilvald (Emile), France:—Restoration of the Cathedral at Laon, and other historic monuments of France.

Viollet-Leduc (Eugène-Emmanuel), France:—Design for the restoration of the Fortifications of Carcassonne and other historic monuments of France.

Division 3.—*Works of the Renaissance.*

Vaudoyer (Leon), France:—Municipal Buildings of Orleans; Design for the restoration of the Temple of Venus, at Rome.

Section III.—*Studies, original, or after existing Monuments.*

Cockerell (Charles Robert), United Kingdom:—Monument raised to the memory of Wren.*

Jones (Owen), United Kingdom:—Studies from the Alhambra, at Grenada.

Donaldson (T. L.), United Kingdom:—Study of a Temple of Victory in the time of the Emperor Adrian.

Second-class Medals.

Section I.—*Designs for Works executed or not executed.*

D'Arnim (——), Prussia:—Design for a palatial residence; Design for a farm.

Hardwick (Philip), United Kingdom:—Goldsmiths' Hall, London; View of Lincoln's Inn Hall.

Scott (G. G.), United Kingdom:—View of the Church of St. Nicolas, in course of erection at Hamburg; View of the Hôtel de Ville, at Hamburg.

Zanth (Louis de), Wurtemberg:—"La Wilhelma," a country-house.

Section II.—*Restorations, and Projects for the Restoration of Buildings.*

Division 1.—*Antique Monuments.*

Baltard (Victor), France:—Design for a restoration of the Theatre at Pompeii.

Clerget (Jacques-Jean), France:—Design for a restoration of the House of Augustus, on the Palatine.

Lefuel (Hector-Martin), France:—Design for a restoration of the Temple of Juno Matuta, of the Temple of Piety, and of the Temple of Hope.

Pacard (Alexis), France:—Design for a restoration of the Parthenon.

Tétaz (Jacques-Martin), France:—Design for a restoration of the Erectheum, at Athens.

Division 2.—*Mediæval Works.*

Daly (César), France:—Restoration of the Cathedral of Alby.

Lassus (Jean-Baptiste-Antoine), France:—Restoration of the Church of Saint Aignan; Design, the Châsse de Sainte Radegonde.

Millet (Eugène-Louis), France:—Restoration of the Church of Paray-le-Monial.

Ruprich-Robert (Victor-Marie-Charles), France:—Restoration of the Church of the Abbaye-aux-Dames.

* "Monument élevé à la mémoire de Wren."

Section III.—*Studies Original, or after Existing Monuments.*

Falkener (E.), United Kingdom:—Studies of Monuments in Italy and Asia Minor.

Hamilton (Thomas), United Kingdom:—View of different works ["monuments"], at Edinburgh.

Section IV.—*Architectural Ornaments, designed or reproduced.*

Denuelle (Alexandre-Dominique), France:—Drawings of ancient Paintings; Decoration of the Choir of the Church of St. Paul, at Nismes.

Petit (Savinien), France:—Chromatic Decoration of the Chapel of Liget (Indre et Loire).

Section V.—*Engraving and Lithography: Architectural Subjects.*

Beau (Emile), France:—Different chromo-lithographs; Drawings of glass paintings.

Gaucherel (Léon), France:—Statues at the Cathedral of Chartres; View of the Town-hall of Sienna.

Guillaumot (Louis), France:—Engravings on wood for the Architectural Dictionary by M. Viollet-le-Duc.

Guillaumot (Claude-Nicolas-Eugene), France:—Ditto.

Huguenet (Jacques), France:—Different architectural engravings.

Honourable Mention.

Section I.

Bilezikdji (Pascal-Artin), Ottoman Empire:—Design for a Monument to commemorate the Alliance of France, England, and Turkey.

Burton (Decimus), United Kingdom:—Designs for Buildings ["monuments"] in London.

Fowler (Charles), United Kingdom:—Designs for Buildings in London.

Garnaud (Antoine-Martin), France:—Design for Opera-house.

Hesse (Charles), Prussia:—Additions to the palace of Sans-Souci.

Wyatt (Thomas), United Kingdom:—Church of St. Nicholas and St. Mary, at Wilton.

Section II.

Abadie (Paul), France:—Restoration of Buildings ["monuments"].

Merindol (Jules-Amieth de), France:—Restoration of the Church of Saint Genac.

Desjardins (Tony), France:—Doorway of the Church of Charlieu.

Durand (Alphonse), France:—Restoration of the Church of Vétheuil.

Gandara (——), Spain:—Campanile of the Cathedral of Palermo.

Laisné (Jean-Charles), France:—Restoration of the Lazaretto of Ourscamps, and of the Church of Notre-Dame d'Etampes.

Lambert (Eugène), France:—Drawing of the "Jubé" of Faouet.

Lenoir (Albert-Alexandre), France:—Restoration of the Hôtel de Cluny.

Lenormand (Louis), France:—Restoration of the Chateau de Meillant (Cher).

Mailay (Jean-Baptiste-Emile), France:—Principal Street of Monferrand.

Mauguin (Pierre), France:—Drawing of the old Doorway of Die.

Revoil (Henri), France:—Drawing of the Chapel of Saint Gabriel.

Verdier (Aymar), France:—Drawings of the Maisons de Cluny.

Section III.

Allom (T.), United Kingdom:—Studies for London Improvements.

Wyatt (Digby), United Kingdom:—Drawing of the Arch of Titus, and of the Upper Church of San Benedetto at Subiaco.

Kendall (H. E.):—Architectural Designs.

Section IV.

Delton (Etienne-Albert), France:—Glass-paintings of the Choir of Ferrière-en-Gâtinais.

Frappaz (Jules-Marc), France:—Illustrations to the Imperial Bible.

Laval (Eugène), France:—Silk tapestries of Tarascon.

Shaw (H.), United Kingdom:—Drawing of the Funeral Pall of the Fishmongers' Company, at London.

Section V.

Clément (Mdme. Anne-Clara), France:—Architectural Engravings.

Guillaumot (Auguste-Alexandre), France:—Architectural Engravings.

Hibon (——), France:—Architectural Engravings.

Lemaître (Augustin-François), France:—Engraved View of the Arch of Orange.

Penel (Louis-Félix), France:—Architectural Engravings.

Ribault (Auguste-Louis-François), France:—Architectural Engravings.

Sauvageot (Claude), France:—Architectural Engravings.

THE AWARDS IN ARCHITECTURE AT THE PARIS EXHIBITION.

Sir,—The jury appointed to consider the architectural works exhibited at the French Exhibition consisted of nine members; six being architects, and two of the six being Englishmen. In the distribution of rewards it must be acknowledged that these gentlemen have not from any false motives of delicacy disregarded their own interest. They have awarded themselves six gold medals; two of them being "grandes médailles d'honneur." Here are their names, and what they have given themselves:—

Sir Charles Barry.—First great medal of honour.

Duban.—Second ditto.

No other great medals given.

Caristie.—First gold medal for restoration of ancient monuments not executed.

Three others given.

Leon Vaudoyer.—Only gold medal given for Renaissance restoration.

Cockerell.—First gold medal for studies of existing buildings.

Lefuel.—Gold medal for designs for restoration of the antique.

Four others given.

One of the points which most surprised and disappointed me in this architectural exhibition, was the almost entire absence of drawings of executed and modern works by our French and Continental *confrères*, and the comparatively few designs exhibited by them. My surprise has certainly not been diminished, when I find that out of the eleven gold medals of the first class, the French have taken eight; out of the eighteen gold medals of the second class, they have taken fourteen; and of the thirty-three "mentions honorables," they have appropriated twenty-three;—leaving for English architects, seven; for Spanish architects, one; for German architects, one; and for Turkish architects, one—total, thirty-three.

I find amongst my own professional friends, that the decisions in this class are as unsatisfactory as those connected with painting and sculpture.

An Architect.*

THE DRAINAGE QUESTION,

INVOLVING HEALTH, HAPPINESS, AND ECONOMY.

As the new legislation places the different localities forming the metropolis in more important relations to drainage than heretofore, and imposes more duties upon those who are to carry that drainage into a proper working condition, not only for the benefit of each house, but also of each locality, it behoves our readers to acquire information on the subject.

After the 1st of January next, every new house, and every house rebuilt from or below the ground-floor, in the metropolis, must have a sufficient "closet," ash-pit, &c.; and every "closet" must have a suitable water supply and apparatus, and suitable trapped soil-pan, and other suitable works and arrangements, so far as may be necessary to ensure the efficient operation thereof. Any offender in respect thereof is liable to a penalty not exceeding 20*l*. The incorporated vestries and district Boards may also in certain cases apply the above powers to any house.

As it were preparatory to such a state of things, we have the Court of Sewers proceeding with great activity to construct the requisite drains, to remove the contents of such closets, &c. and provide also for the abolition of cesspools. It may be a consideration for district Boards, before the machinery of the Court of Sewers is dispersed, to determine whether they should at once undertake the powers of the Act as to drainage, or whether they could not make a fair bargain with the Central Board to do the drainage for them under the power they have to transfer it; for it seems unreasonable that the persons who have had all the experience hitherto, should not be able to do the works required of the districts, at as fair a charge as they could get it done on their own behalf. It appears to be a matter about which

* We have received several other letters to the effect of the above.

the owners, who have to pay, might very well instruct their representatives.

As the changes to be effected under the new Acts are more of managers than of measures, it may be well to note the course adopted by our factory friends in the north of England, under such circumstances. The value of a manager there is shown by his power of drawing the foremen after him, as they value a man whom they understand and respect, and would leave any work for the purpose of serving under him as usual. On the other hand, when a new manager comes amongst those to whom he is a stranger, he tries not to disturb any one under the existing arrangements until he has had some trial of his men and their modes of business. Such also is, no doubt, the rule in large establishments everywhere. So it would be wise in the Metropolitan and other Boards to hold to some provisional arrangements, satisfactory alike to the public, their masters, and to the officers who are to manage their affairs, and not hastily to do injustice to any man's position and prospects. They may thus expect the more able and willing service.

CHURCH-BUILDING NEWS.

Datchet.—The church at Datchet being inadequate to the requirements of the parish, and much out of repair, and the churchyard filled, it has been determined to erect, by subscription, a new church, and also a new vicarage-house. The subscription-list is progressing satisfactorily, and is headed by the name of her Majesty as a subscriber for 100*l.* The Duke of Buccleuch also contributes 150*l.*; and the sum altogether promised to the present time is about 1,500*l.* The sum required amounts to 3,500*l.* It is proposed to erect the new church on the site of the present vicarage-house, and to appropriate a large portion of the vicarage garden as the new burial-ground.

Sherborne.—The Sherborne Burial-board have agreed to purchase four acres of land, in Lenthay-lane, for the formation of a cemetery or burial-ground; and the site has been approved of by the Home Secretary. They have engaged Mr. Haggett as their architect, to prepare the necessary plans and drawings for building two chapels, in the Early English and simplest style of architecture, laying out the grounds, and other works; and the plans and drawings have been approved by the Bishop of Salisbury. Mr. Haggett's estimate for building two chapels, receiving-house, lodge, and office for books, &c.; entrance-gates, making the necessary fences, and laying out and planting the cemetery, draining the same to the depth of 8 feet with a proper outfall, and also for widening and improving the road to the cemetery, amounts in the whole to 2,450*l.* which, added to the 550*l.* sanctioned for the purchase of the land, makes a total of 3,000*l.* The vestry have sanctioned the borrowing of this sum.

Bradford.—The foundation-stone of a new church was laid at Low Moor, on Monday before last, but without the usual ceremony. The church is said to be an addition to those raised in the immediate district by the late Mr. John Hardy. The site is near the highway leading to Wyke. The church will afford accommodation for about 500. The style of architecture is Geometrical Decorated of the time of Edward II. from designs by Messrs. Mallinson and Healey, of Bradford. The edifice will be dedicated to St. Mark. This will be the fifth church that has been reared in the neighbourhood within the last seventeen years, namely, Buttershaw, Wyke, Bank Foot, Shelf, and now St. Mark's.

Otley.—On Saturday evening before last, Salem (Independent) Chapel, Otley, very narrowly escaped being destroyed by fire. Alterations are being made in the chapel. One of the workmen, in order to expedite the process of drying a portion of the newly-plastered walls, had, before leaving the building, made two large fires in the recesses above the organ gallery, and for that purpose had placed on the wood floor two large flags, above which were bricks put edgeways, each fire being also fenced round with loose bricks. The bricks put upon the flags became red-hot, and the flags were also heated, so as to ignite the boards of the floor, as well as a rafter beneath: two holes had been already burnt through the floor, and particles of the burning wood were dropping into the intended class-rooms below, then being used by the joiners, and filled with dry wood, benches, &c. whilst the ground was strewed with loose shavings. Water was hastily procured, and the fires extinguished. A few minutes later and the building would have been in flames, and no one would have been told how recklessly it had been destroyed.

Leeds.—Two workmen have been severely injured by the fall of a scaffolding in course of erection for fixing the roof of St. Mary's Roman Catholic Church here. One of those injured had been sent up to fix the guy-rope to the principal, so as to make all secure; instead of which, from some unexplained reason, he loosened the block, so that the legs veered over and struck down the scaffolding. Three men fell 80 feet, and others leaped on to the adjoining buttresses.

Salford.—Trinity Church, Salford, was re-opened on Sunday in week before last, after having undergone a renovation in its interior, in accordance with the plans and suggestions of Messrs. Isaac Holden and Son, of Manchester, architects. The galleries are supported by solid pillars encased in oak, and the roof by lighter Ionic shafts, which have been painted to represent polished marble, the six pillars on each side of the church being alternately marbled in *verd antique* and *rouge roi*. The whole of the pews and fittings are of dark oak, and have been cleaned and polished. An unsightly signboard in front of the organ-gallery has been removed, and a model of the Royal arms placed there. The chief alteration has been effected in the chancel, which formerly had a dingy appearance. The style of decoration is now in accordance with the Roman architecture of the church. The painting and gilding is the work of Messrs. William Kirkham and Son, of Manchester. Some rudely-painted figures have been removed from a sort of niche in the chancel, and other ornaments substituted. Between the two halves of the double window of the chancel the sacred monogram, I. H. S. has been wrought encircling a cross. What is wanted to complete the effect of these decorations, according to the *Manchester Courier*, it is intended to supply in the form of two stained-glass memorial windows, to be furnished by private subscription. The cost of filling the two windows with stained glass in the Italian style, containing medallions and appropriate scriptural subjects, is estimated at 100 guineas, towards which 60 guineas have been subscribed. The gas-fittings have been altered by Messrs. Harrison and Son, of Salford. The mode of warming the church is still open to improvement: the two unsightly stoves, with their long chimneys in the centre aisle, still remain. The pulpit and reading-desk have been lowered from their former towering height.

ARCHITECTURE AND PUBLIC IMPROVEMENTS.

THE COMPANION TO THE ALMANAC.

THE section of the "Companion to the British Almanac,"* devoted to architecture and public improvements, is this year more than usually interesting. It occupies thirty-four pages, and affords an able *résumé* of much that has been done during the year. The writer says,—

"The increasing difficulty which there is in noticing, adequately, the important works of the year—we might say the impossibility now, of presenting even a catalogue of names — is to ourselves really one of the best pieces of testimony that could be afforded, of the widely-extending growth of art and science in architecture and public improvements. It is true that there are causes for dissatisfaction about popular views on architectural *art*; there are *cliques* amongst professors and students; and researches and theories are sometimes directly productive of error, and only indirectly herald advancement. The real point of excellence, the art, the design, the work of mind, is too frequently not detected by the public. And undoubtedly, the *art* of our time has not kept pace with the progress of mechanical invention and general science. Even in the very application of *science* to sanitary economy, it must, we fear, be allowed that some of the chief questions have not been cleared up; and that, with long arrears to be made good, yet with disaster waiting upon delay, the actual circumstances of the moment are not unalarming."

As the essay is, as yet, scarcely before the public, we give a few extracts:—

Progress.—"We know of no feature which could be more hopeful in the works of the last few years, by educated architects—we might allude even to the last twelve months—than the steadily-growing conviction of the importance of this principle,—the real value and best use of the resources of the time; and the principle to which we have referred has only to be extended to articles of furniture and household use. Many of the evidences are to be observed in the more consistent treatment of decorative ironwork. In practical architecture, the material iron is effecting the most important changes. Areas are now spanned over, which would hardly have been encountered with all the resources of scientific carpentry; and facilities for the admission of light can often be obtained, which are of great importance in a crowded city. Doubts have been raised, sometimes, as to the durability of boiler-plate girders, but the latter can be used for lengths of bearing where the adoption of cast iron would have been the height of temerity. The value as regards internal convenience is obvious, if not also that to art, which should attend the possession of any new resource. But the greatest step which is being made is in the application of cement. It is becoming obvious that the proper artistic use of this material is not in the way of imitating masonry. The employment of brickwork for decorative effect, also is extending; and tiles and glazed bricks are being introduced on many exteriors of a superior character of design. In staircase lights the use of large plates of glass is a resource of great value in such situations; whilst in decoration the material glass is being multiplied into a great number of new forms and colours. The love of decoration in interiors is extending; and the more important works manifest a growing recognition of sound principles,—even if it must be allowed that the majority of others, and private houses especially, still show that much has to be learned there in the way of those principles which, structural in their origin, should be ever found in what seeks to realise beauty in architecture, and which are the very acquisition of value which we say is gleaned from excursions into the arts of the middle ages."

Competitions.—"Advertisements have been addressed weekly to architects, inviting plans to be sent in competition; though we must say that the terms offered—sometimes as little as 5*l.* for the set of elaborate drawings which may chance to be accepted—do not seem calculated to induce much expenditure of thought by members of a profession which requires very varied attainments and a long course of study. The whole question of architects' and sculptors' competitions is one too much mixed up with that of *competition* in general, for those who are most interested to have the chance of speedily settling it; and all that can be at present said is, that competitions now involve much that is unwise as regards all persons interests, and the interests of art, if not much that is degrading or questionable in morals. This, however, is not the place to attempt to show why the best use in every way is not made of the available talent of the country, in cases where there is the necessity for a sudden and general appeal to it. But the Government and the Legislature are not less blameable than municipal and parochial authorities. We may instance the late offer of a premium by the Barrack Accommodation Committee appointed by the Minister of War, where it is stipulated that all plans sent in, rewarded or not, are to remain the property of the War Department. So that, as 130 sets of drawings are understood to have been sent, the country paying, amongst half-a-dozen competitors, 600*l.* in premiums (not a pound more than the money-worth), is to get 124 sets of drawings—involving a cost of, at the most moderate computation, 1,500*l.* to 2,000*l.*—at the expense of the unlucky authors. We have not to urge that the system—here seen in but one of its phases, and that one a comparatively favourable one—is opposed to the high English spirit of honour; we have merely to say that it is one of those matters which require reformation—as an object which, like the popular information on *art*, and the natural apprehension of respective duties and claims between artists and the public, must be attended to, if ever the desired advancement is to be effected in art, and the best use made of such resources of education and skill as may happen to await demand."

Our Statues.—"The public statues erected during the last few years have been as numerous in England, perhaps, as on the Continent; and it has been out of our power to allude to each instance. The Manchester Wellington Monument, by Mr. Noble, is one of the last completed. The hero is represented in

* Knight and Co. 90, Fleet-street. 1856.

ordinary costume, on a tall pedestal, at the base of which are grouped accessory figures. At the same town, the bronze statue of Dalton, by W. Theed, has been completed and fixed. It is placed on an angle pedestal, in the parapet wall separating the public esplanade from the grounds of the Infirmary, and is a copy, on a somewhat larger scale, of a marble statue by Chantrey, in the Royal Institution, at the same town. This principle, in works of sculpture—here carried out on the instructions of the committee—is not a judicious one,—and not merely because the value of a new work is comparatively little, if it cannot be viewed as a work of mind (which surely every public monument should be), but because it is by no means clear that the rules of art as to properties of materials do not apply as much to sculpture as to architecture and decorative art. The antique sculpture in bronze is always very different in treatment to the sculpture in marble. Proportions and details can be fashioned in the one case, which would be beyond the limits of a friable material; and these opportunities, according to all sound principles of art, are to be accepted, not passed by. Moreover, a comparative lightness of character affords the justification that is really required, for the use of a material the colour of which has some heaviness, and we believe it is to mistakes of the kind referred to, as much as the ungainliness of modern costume, that the somewhat unfortunate result in recent works—such as the statue of Sir Robert Peel, lately placed at the west end of Cheapside—is due. We are therefore disposed to suggest to the authorities at Manchester, that they should hesitate before carrying out an intention, lately expressed, of making a statue of Watt (proposed to be placed in a corresponding position to that of the Dalton statue) a copy of the marble statue in Westminster Abbey.—The statue of Sir Robert Peel just mentioned fails in another important particular. It is no exception to the common error in our public statues, of caring little about the accessories and the pedestal. There should in all cases be a proper area of platform slightly raised above the general ground; and if the latter *ascend* to the statue, it is better. Then, with subordinate objects at the angles, and some degree of *design* and decoration in the pedestal itself, not only does the whole become a satisfactory public monument, but the work of the sculptor culminates to its due effect; whereas, a common system is to take no thought about the pedestal,—to set it down where the ground is perhaps lower than that around, and to finish with an ugly railing and four street-lamps."

A Slag Church.—"A church at Oakengates, in Shropshire, by Mr. J. P. Harrison, is important as an instance of the economic use of a local material, viz. the slag from furnaces. This refuse accumulates in the iron districts in vast heaps, spoils the face of the country, and hitherto has been treated as nearly useless. At Oakengates, it was gladly got rid of by the manufacturers as a gift. There would at present be some difficulty in insuring good construction with materials of such irregular form; but if it should be worth while to run the refuse into blocks, this material might become really valuable. But since the erection of the church, a company has been formed for the conversion of the slag into various shapes; and it is found that it can receive a high polish. Considering that, in the manufacture of iron, the refuse is in the proportion of from one to three tons for each ton of iron produced, whilst in the case of lead and copper the proportion is even greater, the matter is one of some public interest."

New Palace Yard, Westminster—"An extensive scheme has been broached. This comprises, in addition to buildings on the line of Bridge-street, the removal of the Law Courts; the erection—somewhat in advance of the present line—of a range of buildings with bay windows, and an arcade, now much needed in wet weather; of a grand gateway at the angle of New Palace Yard, thus enclosed; of the raising the roof of Westminster Hall; the removal of St. Margaret's Church to a fresh site, and of several houses in Old Palace Yard; and some other works. Thus it is believed that the present disjointed and incongruous character of the whole would be remedied; that a proper entrance would be afforded, and that the general mass would group with the Abbey; that building, with the new portion of the Palace, forming two sides of a quadrangle. The new buildings would be chiefly used for Commissions, and similar purposes; for which, as we remarked in a former year, enormous expense is now incurred. The cost of the Palace, with the works in progress or sanctioned, would come to 1,944,226*l.* (inclusive of what has been paid for houses and land), and if Sir Charles Barry's last proposals were accepted, it is believed that the total cost would be made up to 2,595,511*l.* A number of works of painting and sculpture have already been added to the building. The frescoes in the upper waiting-hall, descriptive of passages in the poets, have been some time complete: Mr. Maclise is painting the subject of his picture, 'The Marriage of Strongbow and Eva,' in fresco, in the Painted Chamber, or conference hall; and amongst the recent works of sculpture are bronze relievos in the Prince's Chamber, by Theed, and statues of Selden, by Foley, and Walpole, by Bell, in St. Stephen's Hall."

British Museum.—"The new reading-room now in progress in the inner quadrangle, will meet a want which has been long pressing. By the adoption of the circular form in combination with the other features in the new arrangement, the light in the old part is not interfered with; an effective interior will be secured; apparently ample elbow-room will be afforded to readers; and there will be a great increase of book space. Lavatories and a refreshment-room are still wanted. The entrance for readers will be through the main entrance-hall, in place of the roundabout back-way. The reading-room, or hall, will be in diameter 140 feet; and the height to the top of the central skylight will be 108 feet, taking the measurements in the clear, and before the fixing of book-cases. The dimensions nearly equal those of the Pantheon at Rome; a building between which and that we are noticing, there are points of resemblance—whilst we believe the modern work goes far beyond the ancient example, if not beyond all examples of domed structures, in the amount of skill and contrivance brought to its execution. We refer here to the manner of forming the vault itself—providing the requisite channels for ventilation, and guarding against the spread of fire from external buildings to the interior of the hall, and *vice versâ*; to the securing abundant light; taking up the minimum of space for supports, so as to give the utmost space for books; and providing the requisite counteraction to the thrust of the dome without cross-ties, or counterforts—which here would be in the way. The ingenious and elaborate structural contrivances by which all these objects are worked out, will be concealed when the work is complete; and as they really form what is of chief interest, we regret we cannot explain their nature by the required large illustrations. We may say, however, that the supports consist of uprights of cast iron (massive enough, though barely discernible on our plan) carrying a ring of girders locked together; the latter bearing the dome,—which is to be formed with iron ribs and ties, and brick and tile work, and is to be covered with copper. The hall is lighted partly on the principle of the Pantheon dome; that is, by a light at the top—here 40 feet in diameter—and partly by twenty large windows round the base. Beneath the whole floor will be a chamber for the accumulation of fresh air, moderately heated by hot-water pipes,—the air being passed into the room by numerous apertures. Arrangements for the summer ventilation are also provided. The supply of air is drawn from a vertical shaft. The reading-room is estimated to provide for 100,000 volumes of reference, and about 400 readers at tables radiating from the centre, where the superintendent's raised platform, and the catalogues in concentric cases, will be placed. The new portions (external to the circle) which have ridge and furrow top lights, are chiefly to provide additional stowage for books. The books are to stand on light racks, or cases of wrought iron. The increase of space is very great. The panels of the finished vault will be formed of *papier mâché*, and may be decorated with paintings. Mr. Sydney Smirke is the architect of these works; and whether the suggestion of a conversion of the quadrangle be due to him, or to Mr. Hosking, or others, the actual design and construction do him the highest possible credit."

MAINTENANCE OF NEW ROADS.

As no one else has replied to your correspondent of a recent number, "The oldest Inhabitant," relative to the state of the road in his immediate neighbourhood,—and which having seen in the summer time, I can readily conceive to be in quite as bad a state, after some weeks' almost continuous rain, as he represents it,—I will without one word more as to the disease proceed at once to the remedy.

By a recent Highway Act, it has been, as I think, very wisely provided, that every new road opened in any parish or place shall be of good and sufficient width, and be properly formed, made, and drained; and, after due notice being given, be formally handed over, and if found to be in accordance with the Act, be accepted by the surveyors of the said parish, before two or more justices of the peace, and become from henceforth to all intents and purposes a parish road. This is the purport of the Act alluded to; but as I have not a copy at hand, I quote from memory.

Where there are several proprietors engaged on the sides of a new road, and there are many such in the neighbourhood of London, it is one of the most difficult things in the world to convince them collectively of the necessity of making the road before a brick is laid in the intended new houses; and unless all agree, the outlay of those who are wise enough to see the necessity of it, would be quite thrown away if so applied. Now the building societies which have of late sprung up in such numbers, have very wisely met this outlay in a proper manner; and the first thing they have done on their plots has been the laying out and forming the roads. True, they have the means in their own hands, because they can spread the cost equally or proportionally over the whole of the plots. In all private speculations the nuisance, notwithstanding the drawback which in some instances must be severely felt by not only proprietors but also those who have perhaps unwittingly become tenants of houses thus situated, is not likely to be remedied until the clauses of some future Act shall make it imperative on all owners in such cases to cause proper roads to be made, and as relates to the London district, for aught I know, this may have been already done.

It is very natural that people who are made to pay highway rates and the like, should grumble at not having the same accommodation as the earlier settlers in the parish; but a very little reflection will convince such parties of the injustice of such a notion. In going to and from these newly-opened roads, parties have to traverse a very large portion of the old roads of the parish; whereas the occupants of the old roads, with very few exceptions indeed, never have occasion to go on to the new road; but the Act makes them say,—Put yourselves in as good condition as ourselves, and we will take you into fellowship with us. W. Wilds.

CEMENT FOR WOOD AND METAL.

The following cement will unite porcelain, glass, and, as I have lately found, iron and other metals, to wood, most effectually. I should think it would be admirably adapted for your correspondent's purpose:

Two parts by weight of Portland cement, and the same amount of clean "silver sand," both sifted very finely, must be intimately mixed with one part of glass dust. This compound may be made in quantity, and preserved for any length of time in air-tight vessels. When required for use, it should be worked up with a little of the clear serum of blood (or white of egg, diluted with two-thirds of its bulk of water), with every fluid ounce of which have been previously incorporated twelve to fourteen drops of white vinegar.

It is better first to moisten the surfaces it is intended to unite, with this albuminous menstruum, and then apply the cement, kneaded into a *thick paste* with the same, than *at once* to employ the latter, made of a much *thinner consistency*.

Whenever possible, the points of contact should be made to dovetail into each other in some way, to ensure a perfect junction; and where the surfaces *must* be plain, they might be roughened with considerable advantage. A good deal of cement should be used, and every crack filled up, the superfluity being squeezed out by strong pressure, continued for forty-eight hours. In about four or five days the junction will bear hot or cold water and vibration with impunity. Wentworth L. Scott.

P.S. In reference to my article on "Salt in Walls," &c. I am happy to say that the Crystal Palace Company have set a good example to other subscribers to the *Builder*, by sending me several excellent specimens of "salt.' The cost of adding sulphuric acid to a fifty-gallon cistern was misprinted "eightpence:" it should have been "twopence."

A DIPLOMA SOCIETY.

Whilst reading your recent leading article as to "The Architectural Association," the idea occurred to me of instituting "a general society" of the kind throughout the country, the members agreeing to submit themselves to an examination at the Royal Institute of British Architects. This, with the aid of "the Institute," and backed of course by the *Builder*, would at once put down all opposition to architectural diplomas. I am a young man myself, and feel how great a benefit such a protection would be to those who had honestly earned it; against, as it were, architectural quacks, who not only deprive the competent practitioner of business, but injure the profession generally, by the wretched buildings which are erected under their directions. Of course it would require some hard study to pass such an examination, but that would fill the mind with many good and noble ideas, and which would at some future period be the means also of filling the pockets. Such an examination would, doubtless, exclude many from passing as architects, but who would, most likely, be able to pass for surveyors, which I think every one should do. As every surgeon must pass for an apothecary, so should every architect for a surveyor. As the profession now stands any one may act as an architect; and with a fluent speech, and a large brass plate on his door, cut a very respectable figure in society; but

then, look at the structures they have designed, and carried out, of which your sketch of a "Corner Shop" is a very fair specimen, which looks as though it wanted to bow itself down to the ground in honour of its distinguished originator. A STUDENT.

INVENTIONS AND MANUFACTURES AT THE ARCHITECTURAL EXHIBITION.

THE intimation that the Council of the Royal Institute of Architects have agreed to the request that they should appoint a jury, who will award certificates of merit to such exhibitors of materials, inventions, and manufactures, connected with architecture, as they may think entitled to them, will lead, we should think, to the exhibition of a very large number of interesting objects, and render the Exhibition practically valuable to all concerned or interested in works of construction. A certificate of merit from such a committee as they will, doubtless, appoint, must prove of no small value to the recipient.

Our readers have probably observed that a *conversazione* will be held on every Tuesday evening, when papers on art will be read. These meetings will have the effect of bringing large numbers of the public to inspect the works exhibited.

Notices of Books.

A Treatise on the Stability of Retaining Walls. By JOHN MURRAY, C.E. First Part. Weale, Holborn. 1855.

SOME years ago an eminent foreign architect, who had examined various lines of railways then in course of construction, asserted to us that he had scarcely met during his journey with one person engaged upon the works who could explain to him mathematically the resisting power of the "retaining walls," or the thickness required in one to resist a certain pressure. Whether or not he was exaggerating we will not discuss, but certain it is that this description of knowledge is not so general as it should be. Even if we go to existing theories on the stability of retaining walls, "it will be seen," as the writer of the book before us observes, "how much the one is at variance with the other. If some of these theories be adopted, what a waste of material would be improperly applied: if practice only be followed, how much money would be spent, on the notion of obtaining strength to the structure, by placing the material where it could not be of the slightest use. In this, as in most instances connected with physics, the one must be combined with the other."

In Chapter V. Mr. Murray gives these various formulæ, which have been propounded by mathematicians; and, combining the results (!), deduces that "the thickness of the wall is one-fourth of the height. This thickness, however, is only in equilibrium with the pressure of the earth; and therefore the smallest possible." He concludes:—

"The inference on the whole is, that if we make the thickness of the wall one-third of the height, it will be ample for the average kind of earth pressing against it; but if care be not taken to place the same properly, and there be likelihood of its being saturated with water, acting with the full force of a semi-fluid, we must of course increase its thickness. Whether this should be made nearly one-half the height, as recommended by Mayniel, is however questionable. There is no doubt that it may be very much avoided by having the backing executed, for a sufficient breadth, with proper care. By so doing, a large reduction in the cost of the masonry may be advantageously applied in depositing the backing earth in layers, properly levelled, beaten, and carried up with the building of the wall. In practice this is sometimes done in a slovenly manner, without due superintendence, and is often the cause of failure in the structure."

There is a want of precise teaching in this treatise; readers are left in doubt which really is the correct formula after all: nevertheless we strongly recommend Mr. Murray's work to the consideration of our readers, and even more strongly the special branch of knowledge which the consideration of it involves.

FALL OF A RAILWAY BRIDGE.—On Thursday before last, a bridge over the Stockton and Darlington Railway, near Crook, fell in as six or eight horses, and three or four persons, were passing over. The bridge (made of wood) connected the lands of one farm, and had been in a rotten state for some time.

Miscellanea.

REFLECTOR FOR LIGHTS.—At the meeting of the Institution of Civil Engineers, on the 20th November, attention was directed to a new kind of reflector for lights: it was composed of silvered porcelain, and appeared to possess a very brilliant polish, which was stated to be indestructible. Hitherto reflectors of small sizes only had been produced; but by means now adopted, it was expected they could be made as large as 21 inches diameter over the mouth. If this manufacture was brought to the perfection it was anticipated, a great economy would result, as the silvered copper reflectors, at present used, were expensive originally, were liable to oxydation, and were frequently injured by the care of the attendants, in rubbing them to keep the reflecting surfaces bright.

EXPANDING BRIDGE.—At the same meeting Mr. Lavanchy exhibited a model of an expanding portable bridge, of his invention. The system had been tried at Paris, where a bridge on this principle, fixed upon a boat in the canal, had been used for permitting the passage of troops: the boat yielded considerably to the weight of the men brought upon it, but the bridge remained stiff, and the commanding officer had reported well of its properties. The principle was that of a number of strips of iron or wood, pinned together transversely at such points, as that they should form a series of equilateral parallelograms, the extension being obtained by the motion upon the connecting pins, somewhat on the principle of what was commonly called "lazy-tongs." Its construction was stated not to be at all expensive.

THE TRAFFIC OF THE METROPOLIS.—In the report of the Parliamentary Committee on metropolitan communications, it is stated that about 200,000 persons enter the city each day on foot by different avenues, and about 15,000 by the river steamers; and besides the cab, cart, carriage, and waggon traffic of the streets, the omnibuses alone perform an aggregate of 7,400 daily journeys through the city. The number of passengers arriving at and departing from the London-bridge group of railway termini, which in 1850 amounted to 5,558,000, had in 1854 risen to 10,845,000. At the South-Western Railway, during the same period, the numbers have increased from 1,228,000 to 3,308,000. The number arriving at and departing from the Shoreditch Station last year, is stated at 2,143,000; Euston-square Station, 970,000; Paddington Station, 1,400,000; King's-cross Station, 711,000; the Blackwall Station, in Fenchurch-street, 8,144,000. The committee call attention to the urgent need of plans being adopted to relieve the present over-crowded thoroughfares. They recommend the establishment of new and more direct lines of communications between the principal points of the metropolis; the connection of the various railway termini with each other, with the docks, the river, and the post-office; and the abolition of tolls on the roads and bridges within the metropolitan district.

SURVEYORSHIP.—It is stated that the office of surveyor in the Sun Fire Office is vacant. The salary is, of course, considerable.

NOTTINGHAM SCHOOL OF ART.—On Tuesday in last week the twelfth annual general meeting of the donors, subscribers, and friends of this school, was held in the Exchange Hall, Nottingham, for receiving the report of the committee, electing a new committee, and distributing the medals awarded to the students for works sent to the annual exhibition, Gore House, London. The drawings of the students, from Gore House, and of the pupils generally, were exhibited on the walls. The mayor was called to the chair, and the secretary read the report, in which the committee regretted that they were not able to report so favourably as they could have wished to have done upon the present position of the school. During the past year the numbers of students in attendance had been about eighty each month, which was a falling off as compared with previous years of at least thirty students. The committee were of opinion that this decrease was mainly owing to the frequent changes made in the management of schools of art by the authorities at Marlborough House, and to the want of a second master to the school. In the midst of a good deal of remark from various speakers, unfavourable to the management of the Department of Art, the chairman said he hoped that steps would be taken to represent to Government the steps which the gentlemen of Marlborough House were attempting to impose upon them, and which would soon shut up all the provincial schools of art. It was all very well to say that those interested in manufactures should support these themselves: manufacturers, both here and in other places, had always contributed *their share* and more. But the school was calculated to be of benefit not only to the manufacturers but to the town at large; and it was their duty to aid in the development of what he believed advanced the trade of the town and the commercial interests of the country generally.

GAS.—The Portsmouth Gas Company's men are busily employed, according to the local *Times*, in laying down throughout the town, new mains of a much larger diameter than those at present in use. An insufficient supply, much complained of, has been caused by leakages in the old mains.——A "perdifume" or condenser, has been patented by Mr. Edward Simons, of Dale End, Birmingham. In size and external form it resembles the ordinary shades, and it is suspended in the same manner over the flame. It has a raised and partially closed bottom, containing soda, lime, or potash, which absorbs the carbonic vapours, and thus, it is said, preserves the surrounding air in a state fit for respiration, also condensing the smoke, and retaining the unconsumed carbon, which would otherwise be deposited in more objectionable places. Where it is made of porcelain, or of opaque glass, it is said to increase the illuminating power of the gas, by acting as a reflector. The cost, it is said, is a mere trifle.——With the view of economising the consumption of gas, as well as effectually lighting the streets, an experiment is being tried at Dunbar. The same system was introduced into Haddington some time ago by Mr. D. Roughead, and abandoned before it had a fair trial. It consists of highly reflective lamps placed in elevated situations in different parts of the town, whereby a small jet of gas throws out a great flood of light. There is only one lamp at Dunbar as yet. It has been placed in a window of the top floor of Dunbar House. The lamps on both sides of the streets were put out as far as the West Port, and the street is, nevertheless, it is said, nearly as well lighted as with the present lamps altogether.

SATURDAY HALF-HOLIDAYS.—Mr. J. R. Taylor, of Chancery-lane, has compiled, under the title of "Saturday Half-holidays and the Earlier Payment of Wages," and published in the form of a pamphlet, some correspondence from the public journals on this important subject, together with the resolutions unanimously passed at the public meeting in Guildhall, London, on 15th August last,—the whole addressed to the Lord Chancellor (Cranworth), the Lords of the Treasury, the Lord Mayor of London, the legal profession, and the public in general. The object is to enable those addressed to form a just estimate of the importance of the movement in various aspects, and to point out the best means of carrying out the design.

WOODEN HOUSES.—In a book written by me called "A Sketcher's Tour round the World" (Hurst and Blackett, 1854), at page 159, in speaking of the earthquakes in Chili and Peru, I have remarked on the danger of brick and stone houses, and that if houses were built of timber, exactly as they are in Norway and Sweden, they would be quite safe. The logs are notched into each other at the corners of the house, and the partition of the rooms fitted in the same way, through the side of the house, and each log when put up is placed on pegs previously inserted in the lower one. I think that houses built in this way would be quite safe in earthquakes that would overthrow any brick or stone ones.—R. ELWES.

HOOP-IRON BOND.—As the patentee of the bond upon which you were good enough to express a favourable opinion, I cannot permit the observations of your correspondent, "R." (who has brought forward a very old suggestion, as being a better and more easy method of preventing "longitudinal escape," than by the use of my "Patent Bond"), to pass quite unnoticed, lest those of your readers who have not yet seen the "new bond," may be prejudiced against it, and say it must, indeed, be useless, if "R.'s" suggestion be better. It will not, I think, be necessary to go fully into the defects of "R.'s" notion, as nineteen-twentieths of your readers will have at once seen its objectionable character. It is clearly not so good a method as using the hoop-iron in the ordinary manner, as it divides the building into a series of short ties, offering a kind of premium for a split, on the least settlement taking place, weakens the bond at four places, for every "raising and depressing" of the iron, causes great additional labour, as the iron must be closely dressed at each turn, and entirely destroys the end-to-end tie, so essentially necessary for proper construction. That "longitudinal escape" does now occur, there cannot, I think, be any doubt, although "R." thinks differently; the cracks to be seen in every street offer, acording to my ideas, convincing proof. The methods adopted by many architects to give to the hoop-iron an additional key, and the various experiments tried by many professional men (among them I would mention one of the most celebrated late engineers), clearly prove that "R.'s" opinion is not a general one; and that hoop-iron, as at present used, is not considered perfect, and does not obtain, to the full extent, that object, for which it is especially used. It is to prevent the possibility of "longitudinal escape," that my "Patent Bond" has been designed.

F. TYERMAN.

The proposed Anglo-Gallic Submarine Railway Tunnel.—Another new form of this project has been sketched out by Mr. James Wylson, C.E. in the *Illustrated News*. Mr. Wylson preludes his own modification of the tunnel, by a brief historical record of the various forms under which it has been suggested, and points out the *Builder's* early connection with the project. The names associated successively with it in this sketch are, Mr. Rettie, of Glasgow, C.E. in 1838; Mr. De la Haye, of Liverpool, in 1845; Mr. E. Pearse, of Tavistock, in 1846; M. Ferdinand, in 1848; M. Horeau, in 1851; and Dr. Payerne and M. Favre, in 1855. Mr. Wylson's peculiar modification of the idea consists mainly in the submersion, midway or more towards the bottom of the channel, of a tunnel built on pontoons at the surface, and constructed in a way analagous to that pursued in the cooper's craft, the tube being cylindrical, and consisting of a system of staves and hoops of wrought iron, with some flexible and saturated sheeting between the two, and lined interiorly with dowelled brick, to moderate the buoyancy of the whole, and steady it *in situ* below the field of storm-wave commotion altogether, where it would be moored by weights of sufficient ponderosity after being sunk to its position. The ends of the tunnel would be closed each with a hemisphere of iron, and access be had from above the surface of the water by shafting and platforms, so that the whole would float freely without any rigid attachment to the shores. There might also be shafts for ventilation here and there along the line, with bells and lights to indicate the whereabouts of the tunnel to vessels passing it, and the tunnel might be lighted by electricity, the tops and sides of the carriages being of glass. Mr. Wylson provides for various other contingencies into which we cannot enter. He estimates the total cost of his project, so far as regards the tube itself, at 15,000,000*l.* or 750,000*l.* a mile, the tube being suitable to a single line only, to be worked alternately to and fro. This estimate, as he remarks, is about two and a half times the cost of the London and Blackwall Railway. Mr. Wylson's object is merely to indicate the practicability of the project, and advance it a stage or so towards its possible future realization.

Improvement in Carlow.—A correspondent of the *Carlow Sentinel* speaks of Mr. J. D. Duckett, of Duckett's-grove, Carlow, as one who has fostered architectural taste, and to some extent been instrumental in promoting the fine arts in Ireland, especially by his collection of works of art and science. The writer then proceeds to describe the new buildings at Duckett's-grove. The mansion is said to belong to a transition period between the thirteenth and fourteenth centuries. The style is castellated domestic. It consists of a centre and wings,—the centre, composed of the principal gateway, with lodges on either side, in flanking towers to the gateway. These towers are of unequal height—the one being 50, and the other 43 feet—the taller tower having a characteristic spiral stair leading to apartments above, which are fireproof. By this staircase, which is continuous, there is an ascent to a level flat or terrace of solid masonry, composed of Carlow flags with drips, after the manner of Roslyn Castle. The pile of building is of irregular outline in plan, covering an extent of about 240 feet. The design is by Mr. J. M. Derrick, and the contractors are Messrs. Kelly and Kinsella, who have been occupied about two years in the work.

The St. Andrews School of Art.—This undertaking was formally inaugurated by Sheriff Gordon on the evening of Friday before last, as reported in the *Fife Herald*. The Sheriff delivered an address on the occasion, advocating the wide diffusion of education among all classes of the community, as the most effectual means of lessening crime, and fostering refined tastes in the country. The large hall of the Madras College (where the address was delivered) was filled with the *élite* of the city, who testified their approval of the liberal sentiments submitted to them by frequent applause. Dr. Lees gave an encouraging statement of the progress already made by the committee of management, as to lecturers and enrolments in the several classes which were to commence this week. At the close of the address, a public supper was served up in the Town Hall, and about sixty gentlemen were present.

Birmingham.—The first lecture to the members of the St. George's Instruction Society, was delivered on Tuesday evening in last week, by Mr. George Wallis, head master of the Government School of Art, in continuation of a lecture delivered last winter, "On Elementary Drawing." The special subjects selected on this occasion were light, shade, and colour; and the various points brought out in the course of the address were illustrated by diagrams of colour and paintings, together with sketches in charcoal and white chalk, executed on tinted paper in the presence of the audience.

Leamington National Schools Competition.—We understand that the Lords of the Committee of Council on Education have expressed their approval of the plans prepared by Messrs. Clarke and Worthington. The committee, we are informed, stated that they did not think the estimate (2,022*l.* 10s.) too high for such a school as that in contemplation. Their grant towards the new building will be about 6s. per foot superficial over school and class-rooms, residence for master and mistress, &c. The amount is thus divided: master and mistress's residences, with yards and offices complete, 700*l.*; school-rooms and class-rooms, 740*l.*; sheds, &c. including division-wall, 175*l.*; water-closet building to schools, and fittings, 80*l.*; boundary-wall and iron railing to front, including four gates, 170*l.*; bell and hanging, 7*l.*; grates, desks, benches, cupboards, &c. 125*l.*; add extra for tile roofs, 25*l.* 10s.: total, 2,022*l.* 10s. Mr. John Murray has published an advertisement, a column and a half long, in the *Spa Courier*, impugning the decision.

Somersetshire Archæological and Natural History Society.—The first *conversazione* of this society for the season 1855-6 took place in the Museum of the institution, at Taunton, on Monday evening before last, under the presidency of Mr. W. E. Surtees, when the large room was thronged by the *élite* of the town and neighbourhood. Nearly 200 members and their friends were present. The walls of the museum displayed various additions to the collection deposited in the curator's custody. The Rev. Mr. Warre lectured on the subject of the cathedral at Wells. Mr. Warre's remarks related to the appropriate and judicious use of sculpture and painting, as aids to architecture, but more particularly to the merits of the collection of casts from Wells Cathedral, of which the society had obtained possession since their last meeting. After some little discussion, Mr. R. Walter read a paper "On the Architectural Features of Stoke-sub-Hambdon Church;" after which the company adjourned to the refreshment-room; and when the subject was resumed, some conversation ensued on the topic of Mr. Walter's paper. Mr. Jones then addressed the meeting on "The Microscope, with some of its Uses and Revelations."

Extension of Speaking Tubes.—A fact in acoustics has just been tested at a printing establishment in Liverpool, according to the local *Journal*. Mr. Greenwood's private office is in Canning-place, his printing-office in Trafford-chambers, South John-street. The distance is about 400 feet, and a gutta-percha tube, of an inch diameter, has been carried through yards, houses, cellars, &c. and then passed up to the upper story of Trafford-chambers. A person speaking at one extremity in Canning-place is heard, it is said, as distinctly in South John-street as if he had been within a yard of the speaker. Some scientific gentlemen recommended a tube of large diameter, and one of an inch-and-a-half was tried without success: the inference is, that the smaller the tube the more distinct the words conveyed. Does this, remarks the *Journal*, suggest the possibility of a speaking-tube for miles along a railway? Is it not, we may add, corroborative of the idea that music, and even lecturing, preaching, &c. may be "laid on" in a town, like gas or water, or distributed from some central source and through different routes at one and the same time, by means of very small tubes connected with one or more "auricles," or concentraters, of the particular sounds to be so conducted? The experiment at the Polytechnic Institution, in Regent-street, whereby music is conducted in a way somewhat analogous from one part to another of the premises is an interesting one, and might be followed up by the enterprising manager, Mr. Pepper, with another, of the kind indicated, for the transmission of some suitable lecture, or other oratorical composition, or soliloquy, from an auricle, and through several small tubes simultaneously into different apartments, or closets, prepared so as to receive the acoustic vibrations to the best advantage. The effect might at least be made exceedingly amusing in various ways, though not perhaps of much practical use.

Milton Club Competition.—We understand that the design by Messrs. Banks and Barry has been selected.

The Stained Glass for St. George's-hall, Liverpool.—The *Liverpool Albion* of Monday last mentions that a transparency prepared by Mr. F. Howard, "as a specimen design for a decorated window for St. George's-hall, will be exhibited to-day, in order to give the committee an opportunity of appreciating its effect before giving the order for its execution in stained glass." The subject represents Lord Stanley putting the crown on the head of Richmond, after the battle of Bosworth-field. It occupies the centre window of the five at the side, the size being 18 feet 7 inches by 8 feet 6 inches. It is proposed to fill the window with the single representation of the subject, and to make the outline of the group support the whole of the glass without any arbitrary lines, such as sash-framing and saddle-bars.

Associated Registrars' Committee.—The superintendent registrars and registrars of births, deaths, and marriages, considering it desirable that, as a body, they should have an organised representation, held a meeting a short time ago at the Freemasons' Tavern, at which it was resolved that a committee should be appointed, under the above title, to watch over the interests of the registrars generally, and especially in respect to any legislative enactments affecting them in their official capacity. The committee, in their prospectus which they have addressed to the registrars, inviting their co-operation, desire it to be clearly understood that they have no reason, nor any wish, to complain of the duties imposed upon them by the registrar-general under the Registration Act, but they consider that the experience acquired by the registrars since the passing of the Compulsory Vaccination Act, fully warrants that some endeavour should be made to guard them from the effects of Acts of Parliament containing clauses most difficult to be carried out, and at the same time affording very inadequate remuneration for the duties imposed. This, they are of opinion, cannot be done efficiently without the cordial co-operation of the general body of registrars. The offices of the committee are at 9, Gower-street, Bedford-square.

Architectural Society, Oxford.—At a meeting held on Wednesday evening, the 21st ult. the president, the rector of Exeter, in the chair, the secretary read the report of the committee, expressing a hope that, before any steps were taken towards the much desired restoration of St. Mary's Church, the state of the tower should be carefully considered, since great fears were entertained, from the reappearance and extension of cracks in the masonry. Afterwards the Hon. H. C. Forbes, of Oriel College, read a paper "On the best Style for Churches in the Present Day."

The Royal Institute of Architects in Ireland held its second re-union for the session on Saturday, the 24th of November, and we are informed that the members mustered pretty strongly. Mr. Jacob Owen, V.P. M.R.I.A. occupied the chair; Messrs. M'Carthy, S. Symes, Neville, M'Curdy, J. J. Lyons, James Owen, Astley, Montgomery (members); J. Kirk, Tate, Telford (associates), &c. were present. The business of the evening was chiefly of a financial character, with exception of the announcement of a donation of reports of proceedings from the Liverpool Architectural and Archæological Institute,—an evidence of that proper feeling of cordiality which should always exist between kindred institutions.

Coppin's Iron Theatre, at Melbourne.—The Sydney *Bell's Life* mentions the opening of this theatre, which was made by Messrs. Edward T. Bellhouse and Co. of Eagle Foundry, Manchester. Although erected in the short period of six weeks, it is stated to have a thoroughly substantial look. The *parterre*, having sitting capacity for 700 persons, is divided into pit and pit stalls; and the boxes will hold 450 seated. The decorations are rich and elegant, the prevailing colours being green, pink, and French white. The front of the boxes is ornamented by medallions, illustrating selected situations from the "Merchant of Venice," "Hamlet," "Othello," "Richelieu," "Richard the Third," and "A New Way to Pay Old Debts," which (as well as the general decorations) have been executed by Mr. W. Pitt, formerly connected with the Lyceum Theatre.

Board of Works.—T. Walsham Philipps, esq. who, on his retirement, has been succeeded in the situation of Secretary to the Board of Public Works by Mr. Austin, from the Poor Law Board, served upwards of forty years with ability and zeal in the public service. On the division of the establishment of Woods, Forests, Land Revenues, Works, and Buildings, on October 10, 1851, Mr. Philipps was appointed Secretary to the Commissioners of Works and Public Buildings. Previously he was official secretary to the Chief Commissioner, and clerk to the Board of Woods and Forests; also secretary to the Commissioners of Metropolis Improvements.—*Civil Service Gazette*.

Smithfield Club Prize Cattle Show, 1855.—We are asked to remove the impression which has arisen that this show has been removed from the Baker-street Bazaar, where it has been so long held, and are authorised to say that it will take place as usual on the 11th, 12th, 13th, and 14th of December, at the Bazaar. In taking the Bazaar for a term of years, the committee of the club had in view the fact that the principal supporters of the show are, on the one hand, the general public, who will not follow an exhibition, however popular, to an inconvenient locality; and, on the other, noblemen and gentlemen interested in agriculture—the principal exhibitors—who now resort to the show from day to day, from its contiguity to their London residences, as well as the farmers and graziers, who, when they come to town, like a central situation.